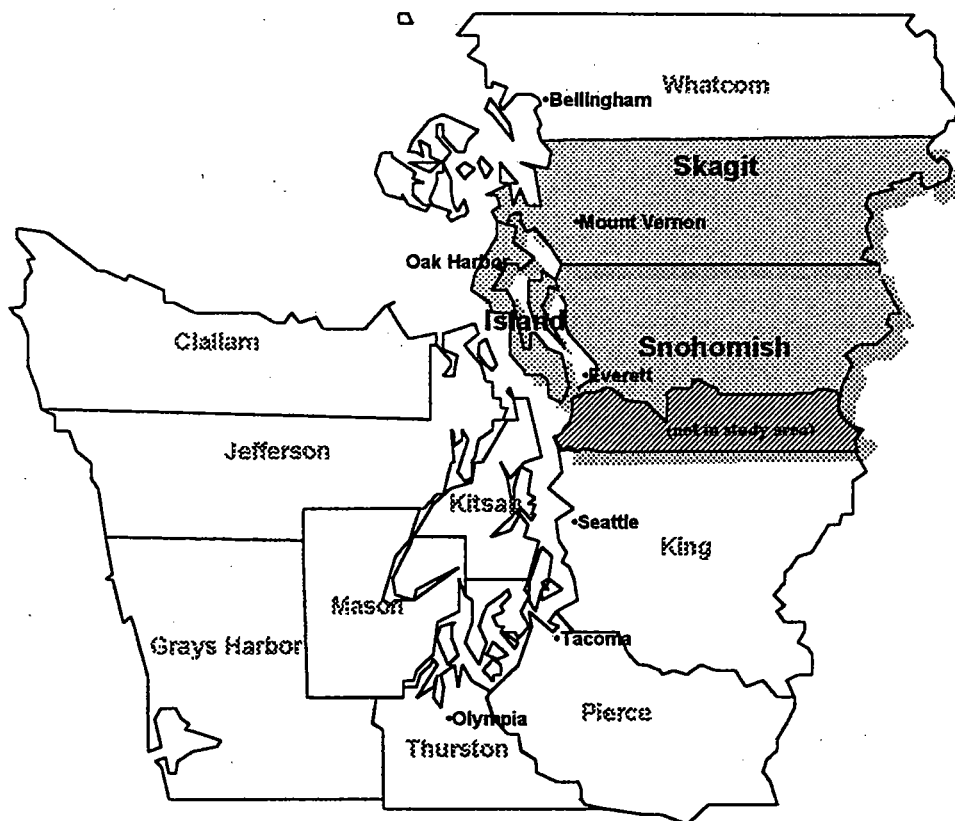


FINAL REPORT

North Snohomish, Island, Skagit Counties Higher Education Consortium

Facility Utilization & Program Delivery Plan



Higher Education Coordinating Board in association with NBBJ

September 1998

NBBJ

Architecture Design Planning

September 8, 1998

Mr. James Reed
Associate Director
Higher Education Coordinating Board
917 Lakeridge Way/PO Box 43430
Olympia, WA 98504-3430

Dear James:

It is with great pleasure that we forward this Facilities Utilization Plan for the North Snohomish, Island and Skagit (NSIS) Consortium. Our years' work with both the Project Coordinating Team and the Planning Advisory Group has been special, because of the genuine cooperation and commitment among the seven consortium institutions, as well as the heartfelt enthusiasm of the community advisors.

We have found several aspects of this project to be truly unique in our experience of planning for higher education, features that may set a new standard in strategic planning for public facilities. In particular, we would like to highlight several features of this plan, including:

- *The community-responsive program plans compiled by the PCT that are the basis for the College and University Centers model and the space planning efforts of this study.* The program plans represent a solid foundation for space planning and the resultant development plans and cost estimates. They will also serve the consortium well in upcoming interim development efforts, and will provide a strong framework for detailed space planning and design in subsequent, long-range facilities planning.
- *The tailored space planning model that is, at once, both simplified and comprehensive, and offers an appropriately detailed approach to long range space planning for higher education facilities in the State of Washington.* Additionally, the model addresses the future impact of technology on space needs in a way that may accommodate a mix of delivery modes by focusing on classroom instruction hours. This is particularly important in a region of varying needs and delivery preferences.
- *The "locale" selection process that reflects a phased response to site selection, is a pragmatic solution for long-range planning of state facilities.* This approach also allows for on-going public input and potentially reduces the impact of land speculation, and cost to the state.



California New York North Carolina Ohio Washington

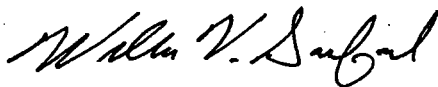
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Mr. Jim Reed
September 8, 1998
Page Two

Finally, we are proud to have supported the consortium in its pursuit of a partnership that offers the "best of the seven" in terms of what the combined institutions have to give to the local NSIS communities. Further, the momentum for partnership and innovation that may be gained by the development of interim facilities in the North Everett/South Marysville locale is exciting, and we will be closely watching the progress to identify the lessons learned that will help shape future implementation efforts.

Thank you for the opportunity to work on this promising project and for the support and direction of the HECB during this process.

Sincerely,



William V. Sanford
Principal-in-Charge



Lyn G. Gahn
Project Manager

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I. INTRODUCTION, STUDY FINDINGS AND REPORT OVERVIEW

This summary includes:

- The planning history associated with this project and the challenge to the consortium in serving the higher education needs in the North Snohomish, Skagit and Island Counties region.
- A listing of key findings in this latest planning phase for the consortium.
- An overview of the major components of the study.

Background

The Legislature in 1997 directed the Higher Education Coordinating Board (HECB) to develop a plan to expand higher education opportunities in the North Snohomish, Island and Skagit Counties (NSIS) region. Prior to the Legislature's action, the HECB had recommended that the state prepare to serve nearly 10,000 new full-time students by Year 2020 through a consortium of existing colleges and universities.

The seven public higher education institutions to be involved in the consortium are:

Edmonds Community College
Skagit Valley College
Everett Community College

Central Washington University
University of Washington
Washington State University
Western Washington University

The Challenges to the Consortium

The NSIS region encompasses an array of local communities within a variety of settings:

- Three counties including remote island and mountain communities and growing urban and suburban centers.
- A diverse economy that includes one of the Pacific Northwest's largest employers, Boeing.
- A strong military presence that includes the Naval Station in Everett, the Naval Support Station at Marysville, and the Naval Air Station at Whidbey.
- The tribal communities within the region, including Tulalip, Swinomish, Sauk, Suattle, Skagit, Upper Skagit and Stillaguamish Tribes.
- A growing Hispanic community in Skagit County.

The diversity of the region's population is reflected in the extensive needs assessment and surveys of employers and prospective students regarding higher education preferences.

- Educational preferences for programs that include associate, baccalaureate and graduate degrees as well as professional education short courses and certificate programs.
- Preferences for wide range of program delivery methods that include evening and distance learning classes as well as traditional classroom instruction.

The seven higher education institutions have formed a "consortium" or partnership dedicated to increasing access to educational opportunities for residents of NSIS region. The consortium proposes to establish "College and University Centers" over the next decade throughout the region that will develop, coordinate, and promote high quality degree and continuing professional education programs at the associate, baccalaureate, and graduate levels. These centers are proposed to be located at existing community college campuses as well as at a new, upper-division focused facility. By building upon the complementary strengths of participating institutions, the centers provide this region – and ultimately Washington State – with a community-based model for extending educational opportunities to underserved students.

The College and University Centers are a response to the challenge to describe the most appropriate means of serving the large, geographically diffuse and culturally diverse population within the NSIS region. The consortium organization and governance issues, program and enrollment plans, and facilities planning efforts entailed in this NSIS II study strive to respond to the unique, higher education needs of the region. The forecast additional higher education enrollment within the NSIS region is significant, adding nearly 4,000 higher education enrollments by the Year 2005 and over 9,000 new enrollments by the Year 2020 (i.e., full-time equivalent enrollment). Given the trend of increasing part-time enrollment, the actual number of students served will likely be greater than these full-time estimates.

A Community-based Program Response

The proposed community college and baccalaureate instructional offerings were identified through extensive surveys of local employers and prospective students. Under this proposal, the baccalaureate institutions would offer undergraduate, graduate or continuing education certificate programs in a dozen fields:

- Business, computer science and engineering
- Social sciences, education and liberal arts
- Engineering, applied technology and communications
- Health sciences, sciences and agriculture

Community college programs would provide job training and complement the baccalaureate program offerings in the following areas:

- Business, computer science and environmental science
- Human services, nursing and education
- Engineering and manufacturing technology

The consortium would serve both working adults and traditional students who wish to pursue workforce training and certificate programs, associate, baccalaureate, and graduate programs without leaving the NSIS region.

The College and University Centers

These programs would be offered at existing community college campuses, at a new, upper-division focused center, and through distance learning. The sites where consortium programs are delivered would be known as College and University Centers (CUC).

A key premise of the NSIS facility study is to maximize use of existing resources. Thus, the expansion of the existing community colleges' main campuses as well as their centers is planned. (Existing community college centers include Oak Harbor, Clinton, Applied Technology & Training Center, and Paine Field.) Additionally, a new center is needed to accommodate the significant future upper-divisions student growth. The new center is estimated to serve roughly 450 full-time equivalent students in 2005, and require 36,000 square feet of academic and support space.

Finally, it is estimated that only a small part of the future student population would be served wholly by technology, with instruction occurring only at the job site or at home. It is anticipated that the majority of students would encounter a mix of program delivery methods, with traditional classroom instruction supplemented by electronic instruction (i.e., one- or two-way audio/visual instruction), remote conferencing, and other forms of distance learning and support services.

Why Not a Branch Campus or Four Year Institution?

A commonly asked question regarding higher education needs in the NSIS region is "Why not a branch campus or four-year institution?" There are several compelling reasons why the proposed College and University Centers are appropriate to serve the region and warrant further exploration:

- Consortium members have a current knowledge of the higher education needs within their communities, a long-standing presence and history of meeting those needs, as well as partnerships with industry within their local communities.
- The College and University Centers, utilizing existing community college campuses and a new North Everett/South Marysville Center, offers physical proximity to expanded lower and upper-division programs to students throughout the large, three county area.
- The resources of the seven consortium members include significant experience and expertise in a wide range of programs and program delivery methods that may be employed at any College and University Center; these resources are potentially more extensive than can be offered by any one, single institution.
- There may be significant potential to cost effectively expand access to higher education opportunities, through the use of existing facilities and sharing of resources. This belief is being tested throughout the planning phases of the project:
 - In NSIS II, the proposed network of College and University Centers is found to compare positively to other, alternative forms of meeting higher education need, potentially offering a 20%–30% capital cost savings in comparison to recent branch campus experience.
 - The potential for sharing resources and reducing operating costs will be explored in the next phases of planning.
- The consortium and network of College and University Centers will not likely require a large infusion of capital funding to begin initial, interim operations in the 1999-2001 biennium.

NSIS Study Findings and Recommendations

The study findings of the consultant include:

1. The forecast enrollment for nearly 4,000 additional lower and upper-division FTE in Year 2005 and over 9,000 additional enrollment in Year 2020 is significant in this rapidly growing region.
2. The higher education needs are wide-ranging in this large, geographically diffuse, and culturally diverse region. The network of College and University Centers, and proposed community-responsive program plans and mixed delivery methods, offer:
 - Proximity and ease of access to expanded lower and upper-division programs to students throughout the region.
 - Opportunity to maximize the local knowledge, presence and long-standing partnerships within local communities held by the existing higher education institutions in the region.
 - The combined resources of seven public higher education institutions to respond to many different and changing education needs and preference of local communities.
3. There is a potentially substantial space and dollar savings in comparison to recent branch campus developments, using the consortium's tailored space estimating model to define the space needs on each of the campuses:
 - Academic space savings are roughly 20 asf per FTE (i.e., roughly 53 asf/FTE vs. 83 asf/FTE) due to assumptions regarding full day operations and use of technology in areas of classrooms, student services, instructional media and administration for consortium facilities.
 - Space savings result in roughly 30% capital cost savings for academic buildings when comparing NSIS II to Phase I of the UWB/CCC branch campus on a capital cost per student/FTE basis.
4. The physical implications of the academic program distribution on each of the community college's campuses is significant in the near term (Year 2005) because:
 - There is no idle capacity in the existing buildings on any of the campuses.
 - Relatedly, only limited land area and incremental facility development capacity exists on any of the campuses.
 - New substantial development will require structured parking on each of the campuses to allow development for academic needs by the Year 2005.
5. The total 1998 dollar price tag for Year 2005 ranges between \$129 and \$132 million in 1998 dollars for development on each of the campuses and the land acquisition, planning and development of an additional upper division united center for that initial time period.
6. As regards the locale for an additional center, the North Everett/South Marysville area provides convenient access to the most residents and employees, in the most efficient way possible (i.e. fewest miles travelled), within the NSIS service area, as compared to five other locales.

7. The consortium institutions have identified a number of interim implementation steps that will continue the collaborative planning and partnerships needed for the College and University Centers success.

The study recommendations of the consultant include:

1. The next phase of long range planning for the region (i.e. Years 2005 and 2020) should include system-wide development economic analyses, site selection for the long-term North Everett/South Marysville Center, and campus master planning, environmental/SEPA analyses and pre-design analyses for each of the College and University Centers.
2. As part of the system-wide development economic analyses, the next phase should explore cost-containing strategies in detail for each community college campus, providing that upper-division services on each of the community college campuses is fundamental to the consortium's academic intent. These strategies may include:
 - Expanding existing community college campus boundaries
 - Creating community college satellites
 - Operating off-site parking and shuttles
 - Maximizing use of public transportation
 - Identifying opportunities for joint state-municipal development (particularly structured parking) or other cost sharing or revenue raising efforts aimed at reducing state-funded parking costs
3. The system-wide development economic analyses should include a life cycle cost analyses for these development strategies that includes:
 - A more detailed look at the needed facilities, particularly at cost savings strategies, as well as own vs. lease alternatives.
 - Operating costs, based on a description of a consortium operating system, and potential ways of cost and resource sharing.
 - Descriptions and costs of needed technology improvements based on a detailed technology master plan.
 - Present value calculations that reflect the time value of money and the phasing of capital improvements.

Report Overview

The following narrative summarizes key findings of this latest planning for the NSIS consortium and includes:

- A brief description of the planning process and key participants in the NSIS planning efforts.
- Key findings of the needs assessments of the NSIS region, including employer and prospective student market surveys, that are the basis for the program plans developed by consortium members.
- An outline of the first, interim step in an evolving consortium organization model, based on the network of centers and designed to be adaptable and flexible in meeting changing educational needs.
- A summary of the facilities and space needed to serve the future enrollments throughout the network of centers, in a variety of settings, including the community college campuses, and a new, upper-division-oriented center.
- Cost and space comparisons with alternative forms of development, such as branch campuses, or a larger new center.
- The reasons for selecting the North Everett/South Marysville area as the preferred locale for the additional, new college and university center.
- Proposed next steps, both for interim operations of the consortium and planning efforts needed for the long-term, regional system.

NSIS II Planning Process and Key Participants

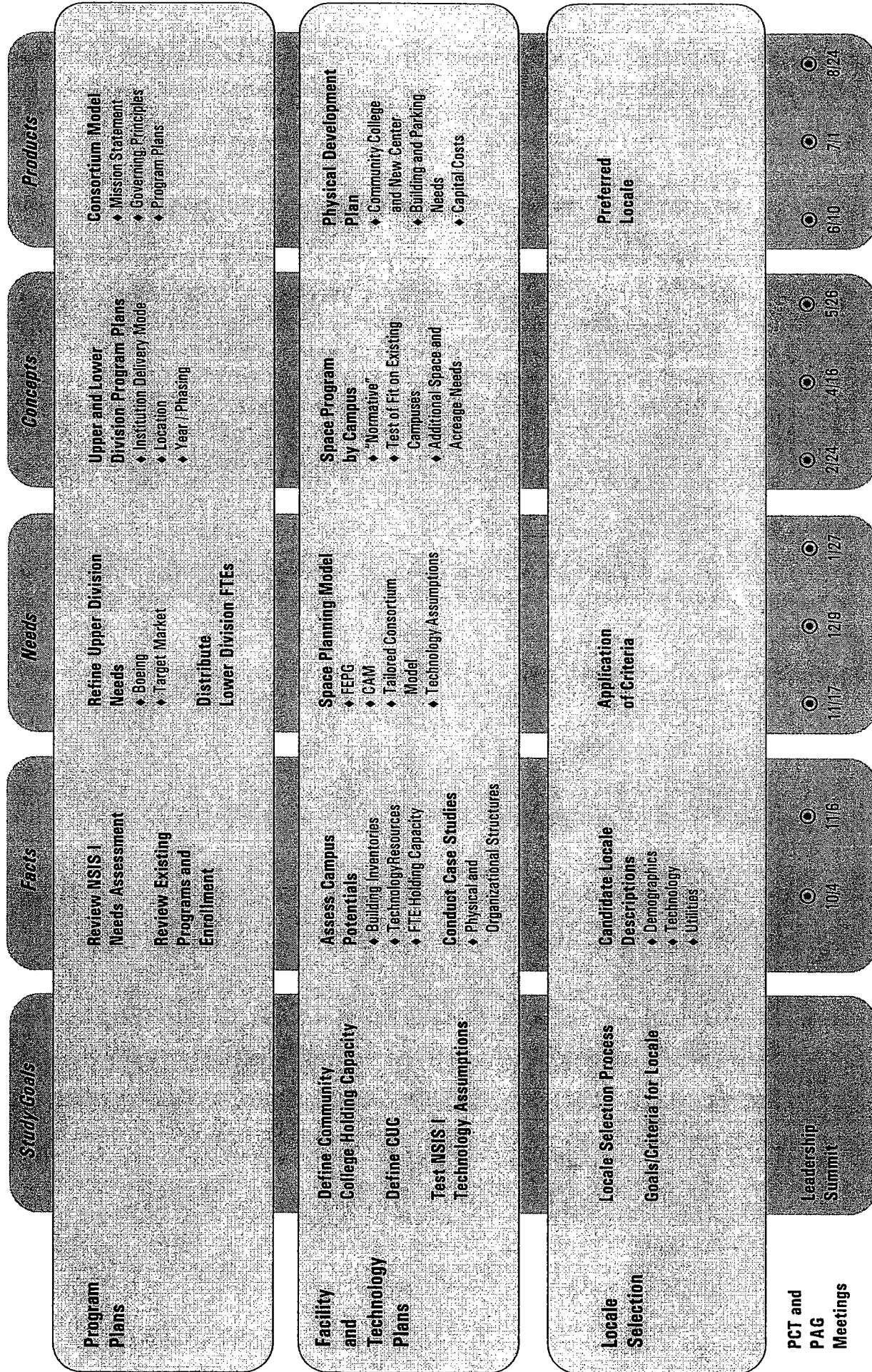
The planning process used throughout the NSIS II study involved several major, concurrent tasks. These major tasks include the consortium model and program/delivery method plans, the facilities utilization plans, and the locale selection for the new center.

Both a Project Coordination Team and a Planning Advisory Group, chaired by the HECB, have guided this project. The Project Coordination Team (PCT) is comprised of the consortium member institutions, as well as representatives from the HECB, the Office of Financial Management, the State Board of Community and Technical Colleges, and the City of Everett. The PCT completed several key tasks, including the target market and employer surveys, lower and upper-division program plans, mission statement and guiding principles, organization structure descriptions, and interim budget requests. This group advised the consultant team regarding facilities plans and locale selection, under the direction of the HECB.

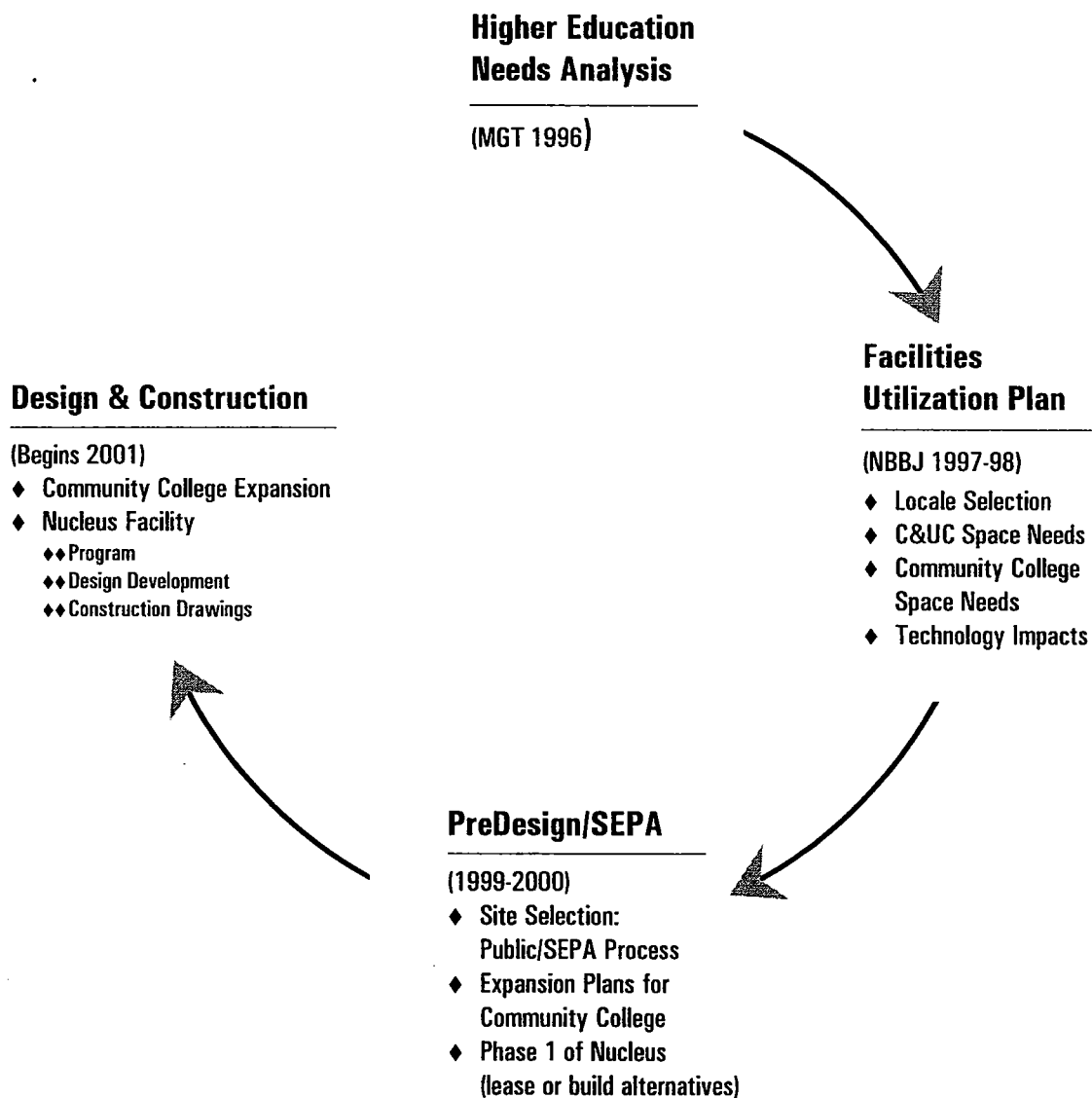
The Planning Advisory Group consists of over two dozen members representing citizens, businesses, and public agencies throughout the NSIS region. This group has met and provided assistance to the HECB and PCT on a monthly basis for over two years. This group offered insights on all steps of the NSIS II efforts.

A series of public open houses were held in five NSIS communities during the last two weeks of August 1998 to solicit input and answer questions about the NSIS consortium.

NSIS II Study Process



Project Process



NSIS Needs Assessment: Prospective Students and Employer Surveys

The participating institutions of the consortium are committed to building programs and related delivery methods that are responsive to the needs of area residents. Many of these prospective students are working adults, who have had difficulty accessing more traditional forms of campus-based baccalaureate, graduate and continuing professional education. From the outset of this initiative, the institutions have consulted extensively with NSIS residents, employers and community leaders to assess the education needs of this three-county region.

Three comprehensive needs assessments conducted between October 1996 and November 1997 have laid the foundation for the program plans that the institutions have subsequently developed for the NSIS region. Key findings from these surveys include:

- The needs of the region are diverse. Residents are interested in various associate, baccalaureate, and graduate degree programs. High levels of interest in continuing professional education short courses and certificate programs were also expressed. Program areas in highest demand include: education and human services, business, engineering, and computer science.
- Prospective students and employers are interested in having a range of program delivery options available to them. The surveys uncovered high levels of interest in evening and distance learning classes, as well as traditional classroom instruction.

The diverse and geographically diffuse population in the NSIS region thus argues for flexibility in program delivery options, from degree completion at community colleges to the use of technology in bringing programs to students' workplaces and desktops.

Community-based Program Plans and the Network of College and University Centers

Consortium members have worked together to develop complementary program plans for each College and University Center, using the needs assessment findings and ongoing dialogue with NSIS communities as a springboard for their program planning efforts. In order to provide a common foundation for the program planning, the consortium developed a set of Guiding Principles that reflect the institutions' approach to program development and collaborative governance.

Intended to serve nearly 4,000 new full-time equivalent enrollments (FTEs) by the Year 2005, the initial program plans rely on the strengths of the participating institutions, both in terms of program content and delivery approaches. In developing first-phase program plans, the institutions have elected to take an incremental approach, building first on programs already in place. Currently, upper-division programs offered in the area include:

- Western Washington University (WWU) and Washington State University both offer programs at Skagit Valley College; WWU served over 600 FTEs at the main campus and the Oak Harbor center in 1996-1997 in human services and education programs.
- WWU also offers a BA and Masters programs at the Everett Community College campus, including the Woodring College of Education.
- Central Washington University served over 300 FTEs in 1996-1997 at the Edmonds Community College campus, offering programs in accounting, business administration, and law and justice.

One important feature of these program plans is their experimental and flexible nature. By allowing for different program mixes at each College and University Center, new partnerships can evolve, among institutions and between institutions and local communities, as demand for courses and programs grows and changes. No one program delivery approach or set of programs can possibly meet the needs of every community in this diverse region. It will therefore be critical for the institutions and communities involved at every College and University Center to conduct ongoing needs assessments to ensure that offerings are responding to community demand.

The College and University Centers

The College and University Centers will serve as the locus of pre-baccalaureate professional/technical and workforce training, baccalaureate, graduate and continuing profession education programs via five primary sites in the NSIS region: Edmonds Community College (Lynnwood), Everett Community College, Skagit Valley College, North Everett/South Marysville Center and Oak Harbor. Additionally several established community college centers in outlying areas, namely Oak Harbor, Clinton, the Advanced Technical Training Center (ATTC) in Everett, and Paine Field will offer a subset of NSIS programs to their communities. Institutions' participation in each College and University Center can be virtual, on-site or some combination of the two, depending upon program requirements and student needs.

During the first, interim phase of this initiative, when programs and support services may be offered at existing or temporary leased space, the baccalaureate institution with an established presence in the community will be designated as the coordinating or convening institution for each College and University Center. Designated convening institutions are:

- Central Washington University at Edmonds Community College
- Western Washington University at Everett Community College
- Western Washington University and/or Washington State University at Skagit Valley College
- University of Washington at the Everett/Marysville College and University Center

In addition to functioning as instructional sites, the College and University Centers will offer support services for student and institutions. The range and mix of services available on-site at each College and University Center will depend on the scope of a given center's programs and facilities. These services may include:

- Student services including admissions and financial aid, academic advising, career services.
- Access, on-site and on-line, to library resources.
- Computing facilities and other technical support systems.
- Presence of a site coordinator to manage the facility and serve as chief liaison to the community and to all participating institutions.

Access to support services may be provided on-site, or at a distance, as determined by participating institutions.

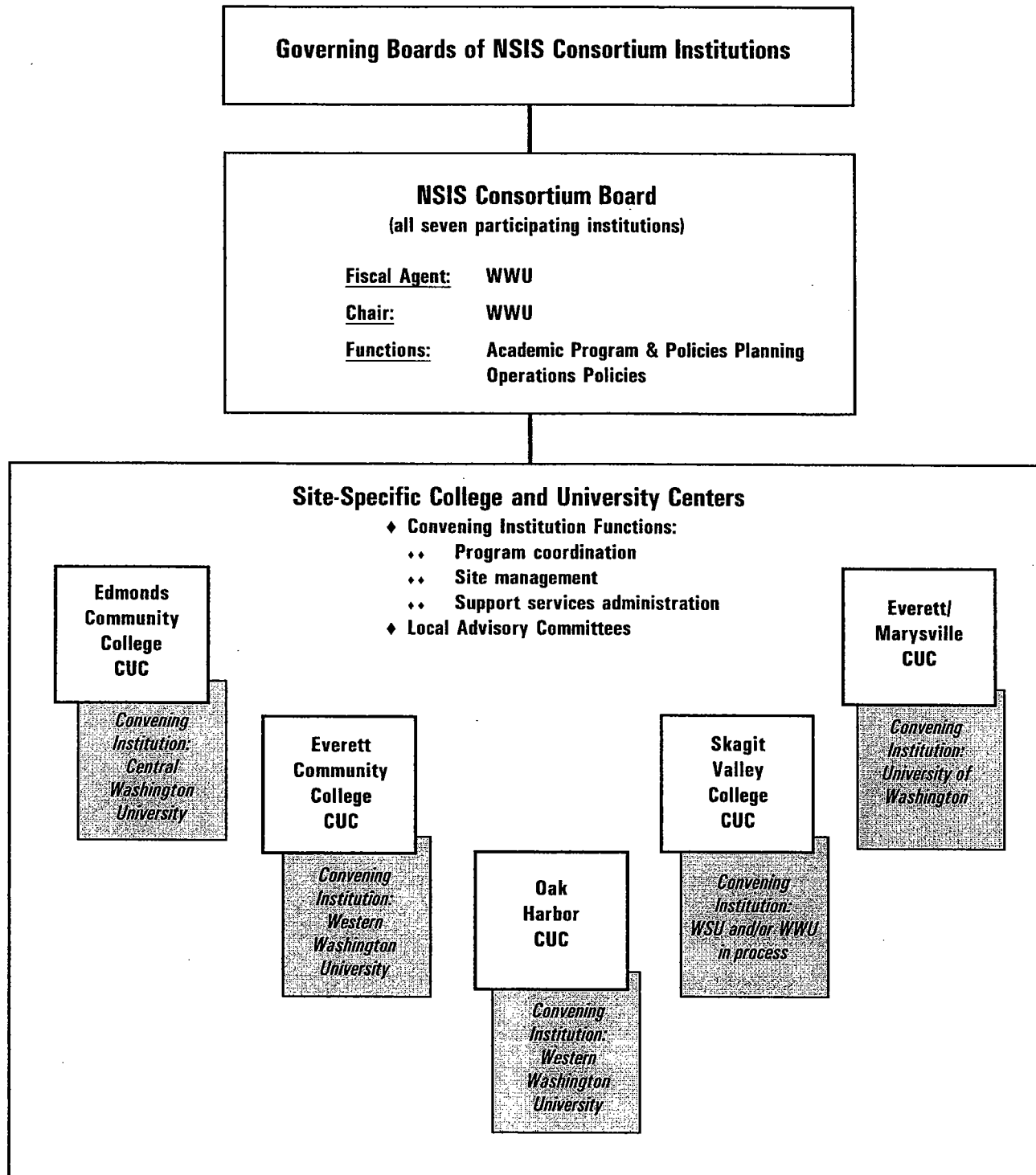
An Evolving College and University Center Model

The College and University Center's governance structure will reflect and sustain the high level of collaboration and creativity that have characterized this initiative to date. The structure will emphasize community-based needs assessment and program planning, while ensuring equity and strategic development at a regional level. In both the short and long term, oversight and governance of the centers will thus be founded upon three key principles: institutional collaboration, community involvement and experimentation and flexibility.

As the NSIS College and University Center model evolves during the next several years, so too will the shape and scope of its governance structure. The first phase of this initiative will rely heavily upon existing facilities and the established presence in NSIS communities. Consequently, the participating baccalaureate institutions will begin developing governance mechanisms that are based in collaborative relationships, but that are flexible and able to adapt to changes in program and capital approaches as the NSIS initiative unfolds. Rather than committing to a formal governance structure that may impede the "organic" evolution and growth of higher education activity in the NSIS region, the institutions will experiment with a structure that blends site-specific program development and needs assessment with statewide oversight and coordination.

This interim structure is illustrated in the following diagram and described in detail in Section VI of the NSIS II Report.

NSIS College & University Centers Proposed Interim Organizational Structure



Preliminary Facilities Needs and Costs for Years 2005 and 2020

A key premise of College and University Centers is to maximize the use of existing community college facilities. However, the three community college main campuses are at or nearing capacity. The anticipated growth in lower-division enrollments, combined with a share of the consortium's new, additional upper-division enrollment leads to significant building and parking structures on these campuses as early as Year 2005. A "test of fit" analysis identified the actual amount of building and parking needed to accommodate the forecast enrollments at each of the College and University Centers, given the limited capacity for new development and the need to replace existing parking in order to expand.

The academic and support space, as well as parking facilities needed serve the forecast enrollments at each College and University Center over the long term is based on a number of planning assumptions and factors:

- The consortium program plans that distribute the forecast enrollments across each of the College and University Centers in the Year 2005.
- A "ramp-up" of the forecast enrollments, to reflect a phased approach to meeting the forecast demand; ramp-up defers 15% of the Year 2005 enrollment to Years 2012 and 2020.
- Inclusion of new running start students that will require academic and service space at the College and University Centers located on existing community college main campuses.
- A tailored space planning model¹ that identifies 53 assignable square feet (ASF) needed for each new FTE at each center and is based on the consortium goals for academic and service support, as well as a planning assumption that 30% of typical classroom instruction be provided off-site via technology.
- A small, modest start at the North Everett/South Marysville Center to serve 450 FTE upper division enrollments.
- Aggressive planning assumptions as regards the percentage of students arriving via transit and other alternative forms of transportation to single occupancy vehicles.

The additional enrollment (FTEs), space and parking needed at each center, and the resultant costs are shown in the following table, Preliminary Capital Costs. Total costs for the Year 2005 range between \$129 to \$133 million, in today's dollars, depending on whether the new college and university center is located in a suburban or urban setting, due to the associated differences in both land value and the estimated amount of structured vs. surface parking.²

¹ Please see Section VII, Planning Assumptions, for a detailed description of the tailored space planning model.

² Please see Section X., System Description and Preliminary Capital Costs, for a description of unit costs.

Preliminary Capital Costs

All costs in 1998 dollars; all dollars in thousands

		<u>2005</u>	<u>2012</u>	<u>2020</u>	<u>Total</u>
EdCC	FTE	632	137	86	855
	Lower Division	202	137	86	425
	Upper Division	430	-	-	430
	GSF	51,000	17,000	-	68,000
	Surface Parking	200	-	-	200
	Structured Parking	380	250	-	630
		580	250	-	830
Project Cost		\$ 22,300	\$ 9,100	\$ -	\$ 31,400

		<u>2005</u>	<u>2012</u>	<u>2020</u>	<u>Total</u>
EvCC	FTE	1,292	703	425	2,420
	Lower Division	1,055	703	425	2,183
	Upper Division	237	-	-	237
	GSF	105,000	57,000	34,000	196,000
	Surface Parking	380	-	-	380
	Structured Parking	652	805	186	1,643
		1,032	805	186	2,023
Project Cost		\$ 49,800	\$ 30,000	\$ 12,800	\$ 92,600

		<u>2005</u>	<u>2012</u>	<u>2020</u>	<u>Total</u>
SVC	FTE	819	432	288	1,539
	Lower Division	624	432	288	1,344
	Upper Division	195	-	-	195
	GSF	66,000	50,000	23,000	139,000
	Surface Parking	192	278	-	470
	Structured Parking	520	-	173	693
		712	278	173	1,163
Project Cost		\$ 29,000	\$ 15,000	\$ 9,500	\$ 53,500

		<u>2005</u>	<u>2012</u>	<u>2020</u>	<u>Total</u>
CC Centers	FTE	493	248	157	898
	Lower Division	356	248	157	761
	Upper Division	137	-	-	137
	GSF	40,000	20,000	13,000	73,000
	Surface Parking	383	159	68	610
	Structured Parking	-	-	-	-
Project Cost		\$ 12,500	\$ 6,100	\$ 3,900	\$ 22,500

COMMUNITY COLLEGE TOTALS

	<u>2005</u>	<u>2012</u>	<u>2020</u>	<u>Total</u>		<u>2005</u>	<u>2012</u>	<u>2020</u>	<u>Total</u>
FTE	3,236	1,520	956	5,712	FTE	3,741	3,404	2,004	9,149
Lower Division	2,237	1,520	956	4,713	Lower Division	2,237	1,520	956	4,713
Upper Division	999	-	-	999	Upper Division	1,504	1,884	1,048	4,436
GSF	262,000	144,000	70,000	476,000	GSF	298,000	292,000	150,000	740,000

UPPER DIVISION

	<u>2005</u>	<u>2012</u>	<u>2020</u>	<u>Total</u>
FTE	505	1,884	1,048	3,437
Site Independent	55	55	55	165
New Center	450	-	-	450
Unallocated	-	1,829	993	2,822
GSF	36,000	148,000	80,000	264,000

SYSTEM TOTAL

	<u>2005</u>	<u>2012</u>	<u>2020</u>	<u>Total</u>
FTE	3,741	3,404	2,004	9,149
Lower Division	2,237	1,520	956	4,713
Upper Division	1,504	1,884	1,048	4,436
GSF	298,000	292,000	150,000	740,000

Suburban Site for New Center

Surface Parking	1,155	437	68	1,660
Structured Parking	1,552	-1,055	359	2,966
	2,707	1,492	427	4,626

Surface Parking	298	938	361	1,598
Structured Parking	-	-	-	-
Land Area	4	13	5	23
Project Cost	\$ 15,400	\$ 53,000	\$ 27,600	\$ 96,000

Total Costs

Suburban New Center	\$ 129,000	\$ 113,200	\$ 53,800	\$ 296,000
Urban New Center	\$ 132,800	\$ 124,900	\$ 58,200	\$ 315,900

Project Cost

	\$ 113,600	\$ 60,200	\$ 26,200	\$ 200,000
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Urban Site for New Center

Surface Parking	75	235	90	399
Structured Parking	224	704	271	1,198
Land Area	2	6	3	11
Project Cost	\$ 19,200	\$ 64,700	\$ 32,000	\$ 115,900

Cumulative Totals

Suburban New Center	\$ 242,200	\$ 296,000
Urban New Center	\$ 257,700	\$ 315,900

Comparison with Branch Campus Development

Using the consortium's tailored space estimating model to define the space needs on each of the campuses, there is a potentially substantial space and capital cost savings in comparison to recent branch campus developments.

Academic space savings are roughly 20 ASF per FTE (i.e., roughly 53 ASF/FTE vs. 83 ASF/FTE) due to assumptions regarding full day operations and use of technology in areas of classrooms, student services, instructional media and administration for consortium facilities.

Space savings result in a roughly 30% cost savings for academic buildings on a per capita basis when comparing the consortium model to Phase I of the UWB/CCC branch campus.³ This comparison is based on academic building space only and logically does not include site-specific costs of parking or environmental mitigation.

The Preferred Locale for the Additional College & University Center: North Everett/South Marysville

The North Everett/South Marysville area was identified as the most appropriate general locale for the new center. This area, defined north and south by roads 116th Street NE (Marysville) and 41st Street SE (Everett), respectively, and defined east and west by urban growth boundaries,⁴ is recommended based on a comparative ranking of 6 candidate locales throughout the NSIS service area. The three most important criteria used in ranking the candidate locales are:

- Percentage of service area residents and employees that live and work within a 30 minute driving time, one-way during peak hour.⁵
- Average travel miles per trip per person served within a 30-minute driving time as a measure of efficiency of time/convenience and resources (e.g., roadway infrastructure, fuel, etc.).
- Opportunities or barriers to technology.

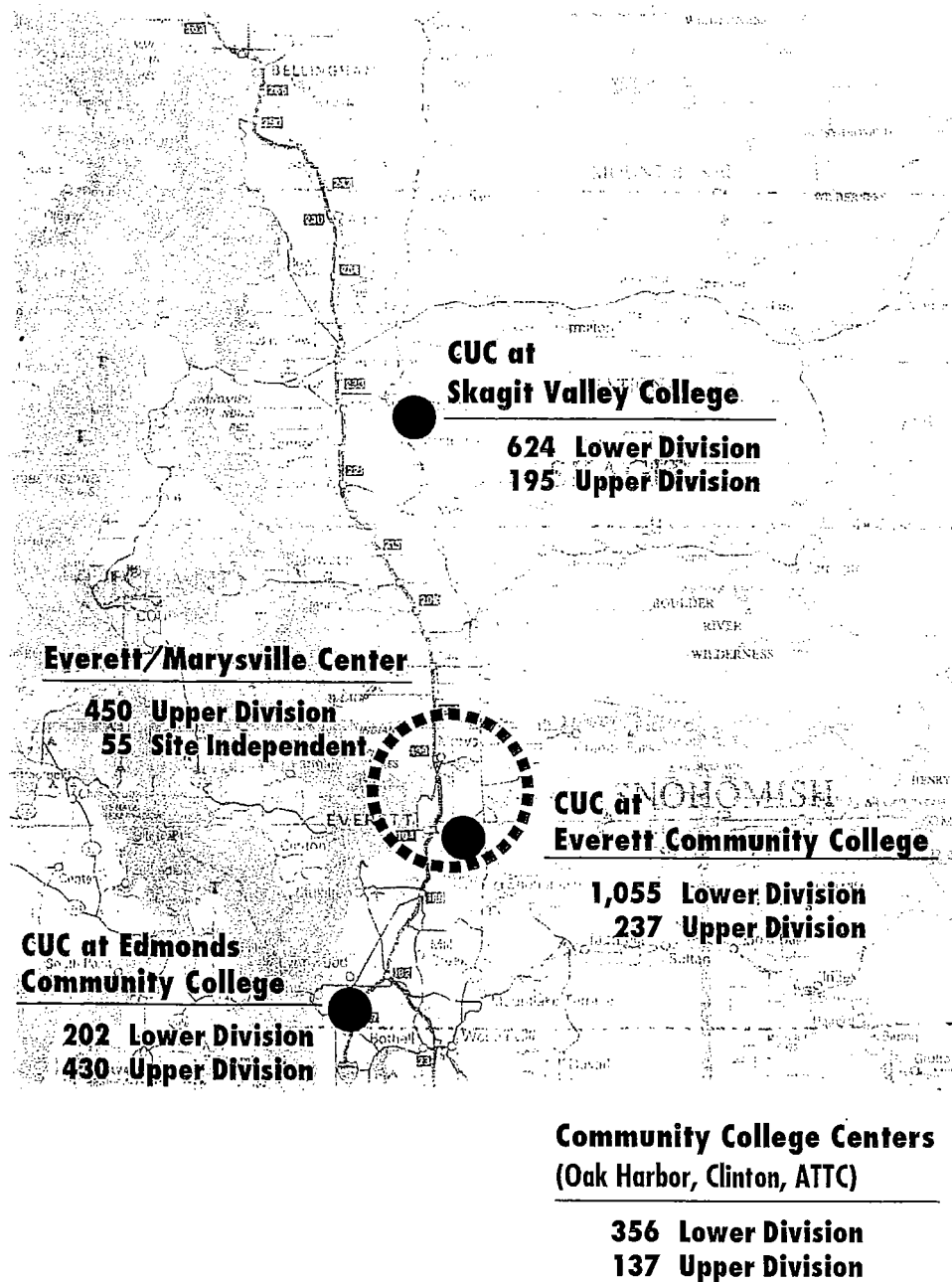
Other criteria included the availability of developable land, utilities and infrastructure availability and capacity, and proximity to existing or planned transit service.

³ Please see Section X, System Description and Preliminary Capital Costs, for details.

⁴ Please note that the Marysville locale may include land owned by Indian nations not under the jurisdiction of the GMA.

⁵ Residents or employees located outside the NSIS service area, but within a 30 minute driving time were not included in the analysis. It is assumed that these residents and employees have access to other higher education opportunities, within the UW Bothell and Shoreline Community College districts.

Year 2005 Additional FTEs by Campus (includes running start students)



NOTE:

Estimates of lower division FTEs have been updated to reflect the share supported by other technologically driven providers.

Next Steps

Next steps of consortium planning include both implementation efforts needed for the interim phase(s) as well as continued planning for the long-range, Years 2005 through 2020 regional system/plan.

Toward Implementation

During the final months of 1998, the consortium institutions will work together to begin offering courses and programs as part of the College and University Center initiative. The first phase of implementation will be, by definition, experimental and will entail the development of flexible multi-institutional arrangements related to sharing interim space (e.g., leased facilities) and program support spaces.

Interim implementation steps include:

- Investigate the options for leasing and sharing temporary space at NSIS sites, with first priority given to ensuring that programs targeted for 1998-1999 implementation have space to operate.
- Develop a 1999-2001 budget request to the state legislature for funding to cover the costs to participating baccalaureate institutions associated with this phase of the project. This request may include:
 - Leasing costs
 - Minimal support for core administrative and academic services (e.g., advising) to defray costs to institutions for development and administration of the College and University Centers
 - Technology enhancements to increase distance learning course offerings at some sites
- Convene groups of institutional representatives in academic support services (e.g., student advising, financial aid, libraries, and computing) to define common center functions, related resource requirements and support needs of each site. Develop joint plans and cost-sharing agreements for common development of these services and facilities.
- Develop memoranda of understanding among institutions that will offer programs and share related resources at interim NSIS sites.
- Designate an on-site coordinator for each College and University Center to be the primary liaison to member institutions and to the community served by the center. One of the coordinator's central responsibilities will be working with the institutions to develop guidelines for shared use of scheduled space.

Long Range Planning

Subsequent phases of planning for the consortium and College and University Centers should explore cost containing or sharing strategies for expansion of the Community College campuses. These strategies could include:

- Expanding existing community college campus boundaries
- Creating community college satellites
- Operating off-site parking and shuttles
- Identifying opportunities for joint state-municipal development (particularly structured parking)

A system-wide life cycle cost analysis may be beneficial to the consortium members and key decision-makers by exploring both capital and operating costs. A life cycle cost analysis will also identify tradeoffs between possible phasing alternatives, taking into account the time-value of money (i.e., escalation rates, inflation, and discount rates). The life cycle cost analysis would likely include:

- A more detailed look at the needed facilities, particularly at cost savings alternatives, as well as owning and leasing arrangements.
- Operating costs, based on a description of a consortium operating system, and potential ways of cost and resource sharing.
- Descriptions and cost of needed technology improvements, based on a detailed technology master plan.

Next steps would also likely include facility alternatives and site selection for the North Everett/South Marysville Center, and any public process needed to make a site purchase.

II. PURPOSE & PROCESS

A. Policy Reference

In 1996, the Legislature directed the Higher Education Coordinating Board (HECB) to evaluate postsecondary education needs and alternative delivery methods in the North Snohomish, Island and Skagit Counties (NSIS) area. In response to this directive, the HECB, in consultation with the Office of Financial Management and representatives of public institutions of higher education undertook and completed a Needs Assessment (MGT of America, November 1997) for the three county area. In response to the findings of the Needs Assessment, the HECB adopted Resolution 96-36, which recommended to the Governor and Legislature that:

- Capacity to serve an additional 9,936 FTE enrollment by the Year 2020 would be required (i.e., 4,793 lower-division and 5,143 upper-division and graduate FTE) to meet the HECB's state-wide participation rate goals for lower-division, upper-division and graduate enrollment in the study area.
- A consortium of existing area community colleges (Everett Community College, Skagit Valley College, and Edmonds Community College) and public four-year universities (Western Washington University, Washington State University, Central Washington University, and the University of Washington) be established.
- That the three existing community colleges be responsible for serving the projected four-year growth, or unmet need, in lower-division enrollment in the study area and that the four public universities be responsible for providing upper-division and graduate level programs in the study area.

HECB Resolution 96-36 also recommended that the consortium members, in consultation with the HECB prepare:

- A time-phased program plan and enrollment plan for the study area.
- A mission statement for the consortium.
- A plan for ensuring community participation in the planning of consortium programs.
- An inter-institutional agreement delineating institutional authorities and responsibilities.
- A lead institution to serve as fiscal agent.
- Operational policies and procedures.

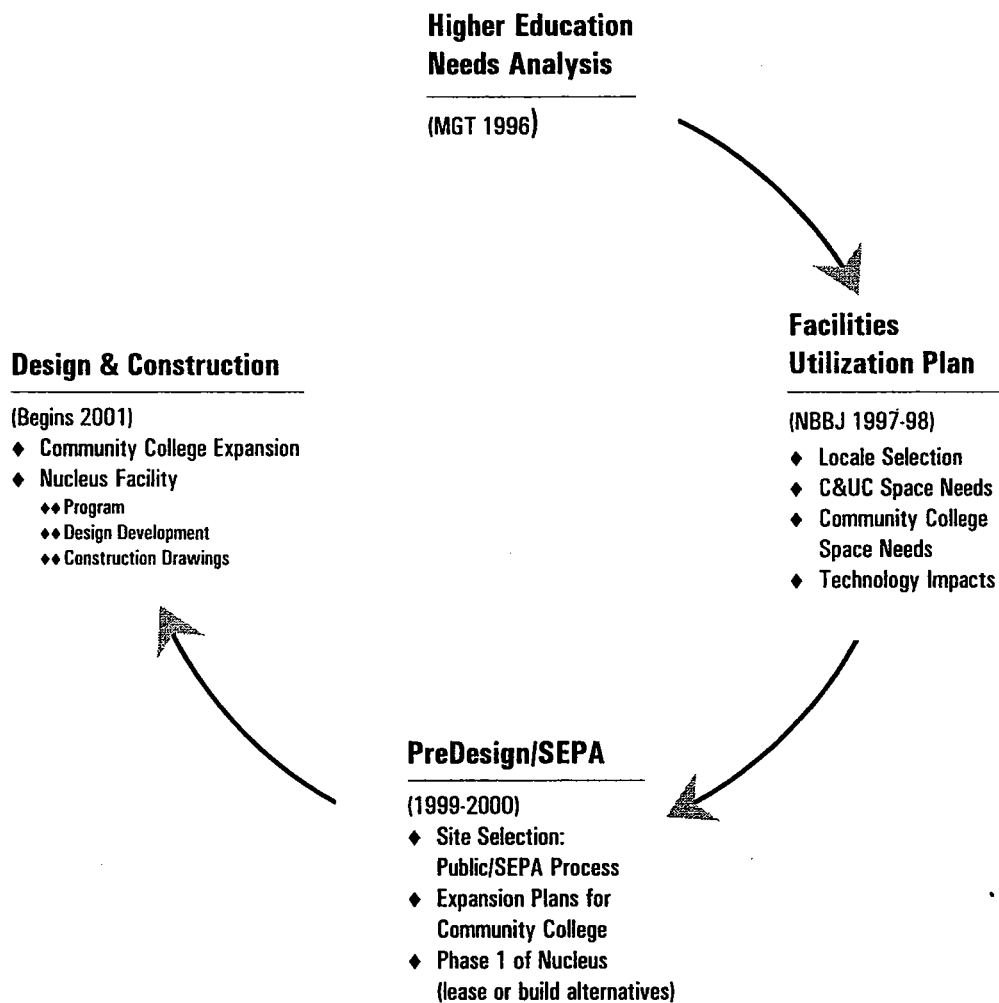
Finally, HECB Resolution 96-36 recommended that a facility utilization plan for the expansion of the three existing community colleges and the development of a "nucleus" facility for the consortium be prepared.

In response to these recommendations, the 1997 Legislature authorized and appropriated \$376,000 to the HECB to prepare a facility utilization plan for the higher education consortium.

B. Project Planning Process

The multi-phase process to define and implement the means of meeting the higher education needs of the three county area can be generalized into four steps, as shown in the following figure, Project Process. These four steps include the initial NSIS I Needs Assessment Analysis completed in 1996, the current NSIS II Facilities Utilization Plan, subsequent Pre-Design/SEPA Analyses and, ultimately, the design and construction of both new and expansion facilities.

Project Process



C. Nomenclature

NSIS is the acronym used for the HECB study of activities of postsecondary needs, program delivery methods, and facility requirements for the North Snohomish, Island and Skagit Counties area.

- NSIS I defined the study area needs, alternative methods of program delivery, and organization models.
- NSIS II is the current phase, which identifies a program delivery and facility utilization plan for the model.
- Consortium refers to the current partnership of seven higher education institutions.
- FTEs are full-time equivalent enrollments and refers to State-funded students in this report.
- Distance Learning refers to a variety of program delivery methods, including correspondence courses (mail, tape or Internet-based), instructional video tapes, e.g. or live video.

NSIS I led to the recommendation to serve expanded lower and upper-division enrollments through a higher education consortium model. The higher education consortium model is a partnership of two- and four-year institutions delivering lower and upper-division programs as well as certificate and continuing education programs for professional development. The locations at which these programs are to be delivered are called College and University Centers (CUC). For the NSIS area, the Legislature has authorized the HECB to prepare a facility feasibility plan for three centers collocated at existing community colleges and one stand-alone facility. The stand-alone facility is referred to as the “new center” or “additional center” or North Everett/South Marysville Center in this document.

D. Study Organization

The NSIS II study has been directed by the HECB and guided by both a Project Coordination Team (PCT) and a Planning Advisory Group (PAG). The PCT consists of key persons from each of the seven participating institutions, as well as representatives from the state Office of Financial Management, the State Board of Community and Technical Colleges and a representative from the City of Everett. The PAG consists of members of the three county communities, representing key industries as well as governmental agencies.⁶ Both groups have been meeting since the inception of the NSIS project, since spring 1994.

⁶ Please see Appendix A, PCT and PAG Rosters, for a complete listing of the members of these groups.

The PCT is an active participant in this study, meeting nearly monthly to review materials and progress and guide the direction of the study. Most importantly, the PCT completed several key tasks over the course of 1997–1998 NSIS II study, including:

- Creating the mission statement and guiding principles for the consortium.
- Completing two upper-division needs assessment studies, including an employer survey and target student survey.
- Identifying program plans for lower and upper-division and graduate and certificate programs for the first phase of the project (i.e., through Year 2005), including continuing and interim programs.
- Distributing the projected FTEs across all campuses and centers.
- Compiling an interim capital and operating budget (i.e., for Years 1999–2000).

The PAG has continued to give input and feedback throughout this study, meeting and providing advice every 6 to 8 weeks. The PAG has also taken on the task of assisting the HECB in the community participation process, by volunteering to organize several public hearings held during the month of August 1998, to share the project planning with their local communities.

E. Study Goals

Both the HECB and the PCT identified key goals for the study at the outset of the project. These goals have guided the study process.

1. HECB's Three Goals

The HECB's three goals for the project are:

- Describe expansion potential for the existing community college campuses and centers in terms of student capacity, space needs and technology improvements; identify technology planning assumptions.
- Identify preferred “locale” for the stand alone center; create audit trail of candidate locales, criteria, application of criteria, and preferred locale; estimate and describe space needs for the additional facility.
- Evaluate alternative system approaches to meeting higher education needs of the study area for near and long term (i.e., Years 2005 and 2020) to provide interim solutions and ensure wholistic planning and continuity.

2. *PCT Objectives and Expectations*

The PCT identified some 16 different objectives, and rated the following five as holding their key interest:

- Create defensible, accurate development plans for community college campus and center expansion; test ability to meet enrollment need.
- Create an externalized process for site selection; consider full range of sites and forms of development for the additional center.
- Achieve clarity, depth in application of K-20 Network to consortium planning; be a “leading example” and make a clear statement of assumptions regarding K-20 Network.
- Identify how planned facilities (i.e., expansion of existing campuses, and new center) fit within statewide capital budgeting process and priorities, including fit within individual institution budgets, the SBCTC budgets, HECB recommendations, and Governor’s 10-Year Plan.
- Have a clear academic plan for serving the study area as the basis for the facilities utilization plan.

F. *NSIS II Study Process*

The planning process involved concurrent efforts in three major areas: educational needs surveys and program planning, campus assessment and facilities planning, and locale selection. These efforts are shown in the following Technical Approach.

1. *Educational Need Surveys, Program Plans and Organization Model*

A key objective of the NSIS II study is to “have a clear academic plan for serving the study area as the basis for the facilities utilization plan.” To this end, the consortium members/PCT undertook several additional surveys to assess upper-division and graduate interest as well as industry need within the study area, and compiled preliminary program plans to meet these needs.⁷ These program plans are translated into a distribution of forecast student enrollment across the community college campuses and centers, and the new center site for the Year 2005 (i.e., numbers of students to be served at each site). The Year 2005 Development Plans for the existing community college campuses, and the new center are largely based on the enrollment distribution resulting from the program plans.

Student accessibility, program needs and delivery modes largely drive the organization model, mission statement, and guiding principles for the consortium. In addition to building on the existing strengths of the member institutions and strengthening existing partnerships, the guiding principles of the consortium focus on fostering flexibility in programs and delivery modes to meet diverse and changing higher education needs. This emphasis on program-driven facility planning is possibly unique in the state.

⁷ Please see Sections IV and V, Program Plans and Consortium Organization Model and Structure.

2. *Campus Assessment and Facilities Planning*⁸

Another key goal and objective for the study is to test the ability of the existing campuses to accommodate the forecast enrollments. Physical Development Plans are created for the Years 2005 and 2020 to identify the amount of academic space and parking needed to serve the forecast enrollments at each of the existing community college campuses, centers, and the new, stand-alone center.

The campus assessments and facilities planning efforts involved:

- Assessing existing campus(es) conditions through site tours and building and parking inventories to gain an understanding of development and circulation patterns, idle capacity, and estimates of future development capacity (i.e., potential new building and parking footprints).
- Creating a tailored space planning model for the consortium based on goals of the consortium about classroom utilization, activities occurring off-site, and the use of technology. The tailored space model is compared to other space planning tools currently in use by higher education institutions.
- Applying the tailored space planning model (i.e., assignable square feet per FTE) to the distributed enrollments and identifying the “normative” amount of space and parking needed to accommodate the forecast enrollments at each campus or center, for each timeframe.
- “Testing the fit” of the normative space and parking needed at each campus against existing campus conditions, in order to identify any parking replacement due to new facilities, and the mix of surface and structured parking.
- Estimating the capital costs of the building and parking improvements at each of the campuses, centers and new center.
- Testing alternatives that alter the distribution of FTE, resulting in changes in the size of the new center, as well as the building and parking improvements at the existing campuses. The preliminary estimates are also compared with other, recent branch campus developments.

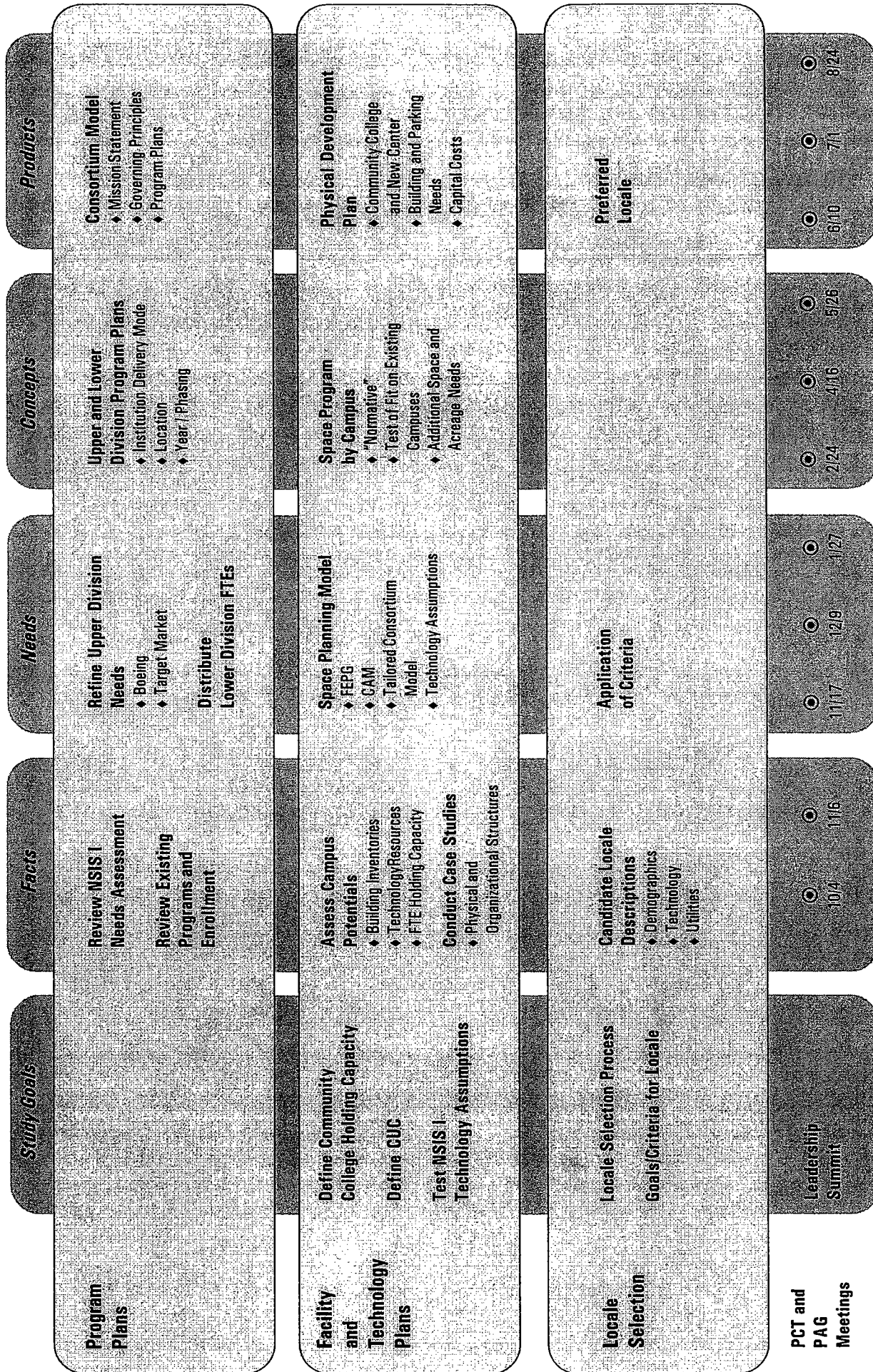
3. *Locale Selection*

The goal to identify a preferred “locale” for the new, stand-alone center and to create an audit trail of candidate locales and application of criteria and evaluation is met through an externalized process, involving both the PCT and the PAG. Both groups identified the locational criteria for evaluating the candidate locales, offered suggestions for the candidate locales, and reviewed the analysis at several key points. Group members also provided assistance and information during the analysis and suggested various means of applying the criteria.

Early in the planning process, the PCT, PAG and HECB determined that the NSIS II study should set the boundaries for the most appropriate general location for the center. Selecting a preferred locale, rather than a site, is intended to avoid speculation regarding specific sites or inflate the value of candidate sites and facilities prior to state purchase or lease. Subsequent phases of this consortium effort will identify, evaluate and compare specific, alternative sites and forms of development for the proposed new facility within a public process.

⁸ Please note that acronyms used in NSIS II Study Process, such as FEPP or CAM are described in Section VII, Planning Assumptions.

NSIS II Study Process



III. PROJECT BACKGROUND

A. Service Area Definition

The service area for the consortium is defined as the whole of Skagit and Island Counties, and that portion of Snohomish County that lies north of the service area for the University of Washington, Bothell/Cascadia Community College district. An understanding of the service area is important for several reasons:

- **Coordination with Existing Community College District Boundaries:** The NSIS service area corresponds roughly with both the Skagit Valley College (SVC) district and the Everett Community College district, with the exception of SVC's Friday Harbor Center, which is not included in the NSIS service area. The NSIS service area includes only a portion of the Edmonds Community College (EdCC) district. This fact has the following implications for NSIS planning:
 - **Impact to Community Campus Expansion:** The Development Plans, and associated costs, for EdCC will serve the forecast enrollments within the consortium service district, but do not reflect total EdCC student growth or facility expansion needs. The greatest impact will likely be on the timing and amount of structured parking needed on the campus to serve total district enrollment when other alternatives, such as expanding campus boundaries, are explored.
 - **Impact to Locale Analysis:** A key locale criteria is student accessibility to the new center and is measured in terms of a 30 minute travel distance to population and employment centers. The locale evaluations, and 30 minute travel distance areas, do not extend beyond the NSIS service area. Residents outside of the NSIS service area are served by other institutions, such as the UW Bothell branch campus to the south. This factor, in part, drove the locale selection northwards within the study area.

B. Summary of NSIS I Needs Assessment

In 1996, the Legislature authorized the HECB to undertake a study of the higher education needs in the North Snohomish, Island and Skagit Counties. The result was the "Evaluation of Higher Education and Work-Force Training Needs and Program Delivery Alternatives for the North Snohomish, Island and Skagit County Area of Washington State," published September 12, 1996, by MGT of America, Inc. The NSIS I needs assessment focused on three major areas:

- Postsecondary education needs including the needs for conventional higher education services and for workforce training and retraining programs.
- Alternative methods of program delivery.
- Alternative organizational models and structures for delivering programs, especially "distance learning."

Both the Project Coordination Team (PCT) and the Planning Advisory Group (PAG) were involved in the NSIS I study.

The findings of the NSIS I study are the basis for the NSIS II facility utilization plan in terms of the forecast enrollments, potential programs and program delivery modes, and the multi-institution consortium model.

The findings and recommendations from the NSIS I study included: (Note: Figures stated below are rounded to nearest 100.)

1. NSIS I Forecast Enrollment Estimates

- Snohomish, Island and Skagit counties are among the 4 fastest growing counties in the state, with growth ranging from 25% to 45% by Year 2010, and from 37% to 89% by Year 2020.
- Community College forecast enrollments are based on 1995 participation rates, except for Island County, which was increased slightly.
- Four-year lower-division enrollments will grow in proportion to population growth and will be accommodated by existing Washington institutions of higher education.
- Upper-division and graduate forecast enrollments are estimated using goal-based participation rates provided by OFM, that reflect the HECB objective of achieving the current (i.e., 1995) national participation rates by Year 2010 and the 70th percentile by Year 2020.
- Upper-division and graduate forecast enrollments are adjusted by the growth to be met by existing institutions in order to reflect unmet need.
- Forecast enrollment as expressed in full-time equivalent students (FTE) (i.e., 12 average quarter credit hours) are estimated below.

**Community College Enrollment Growth
and Needed Upper-Division and Graduate Enrollment**

<u>Year</u>	<u>Community College FTE</u>	<u>Upper-Division & Grad FTE</u>	<u>Total FTE</u>
2005	2,270	2,051	4,321
2010	3,239	3,309	6,548
2020	4,793	5,143	9,936

2. *NSIS I Recommended Program Delivery*

Recommendations for program delivery systems are based on community meetings, telephone surveys, interviews with key community and business leaders, written surveys and meetings with PCT and PAG groups.

The key issues identified through these qualitative measures included:

- Accessibility, in terms of proximity to the point of delivery of educational services, particularly due to geographic isolation in Island County for place-bound, older and working students accessing upper-division programs.
- Job related programs, at all levels of postsecondary education that are practical and provide preparation for employment and upgrading skills.
- A strong collaboration among educational institutions, business and municipalities that can offer economy, share resources, maximize program and delivery systems opportunities.
- A visible presence of postsecondary programs was expressed throughout the study area.
- Information about postsecondary programs was thought to be missing or weak.

Employer surveys showed that in the near term:

- New employees will be hired in all areas, with emphasis on professional staff, skilled technicians, clerical staff and skilled and unskilled laborers.
- Management and professional staff are required to have postsecondary degrees while skilled technicians need a vocational or two-year college certificate.
- A significant portion of the workforce will require re-training and new educational programs; computer skills is the most important training needed.
- Employers currently offer a wide variety of training programs.
- Employers responded that more visible sites and programs within the study area are needed.

Consumer surveys showed a need for technical, liberal arts, business, health-related and computer science programs, while students emphasized education, computer science and liberal arts programs. Finally, concerns of special populations, including the Tulalip Tribes and the growing Hispanic population in Skagit County were expressed. The Tulalip Tribes seek programs that can be delivered on or near the reservation, desire programs that prepare tribe members for jobs in the casino, hotel and golf course, and in small business management programs to build up the community. They are also looking for basic vocational and technical programs to prepare members for entry-level positions in order to encourage success and self-sufficiency. In Skagit County, language is a barrier to both education and work opportunities; community members suggested that ESL be paired with practical, job-related content.

Community leaders “overwhelmingly indicated that a classroom setting with a teacher and students would best meet the needs of the study area in terms of program delivery.” The second highest delivery system rating was the two-way voice/video delivered in a group setting. Consumers shared a preference for a blended delivery system, combining typical classroom instruction and technology delivery. Students’ preferences were similar to community leaders, with typical classroom instruction, two-way voice/video in a group setting, and finally Internet and telecourses or two-way video from work or home.

All forms of support and service were considered important or very important.

3. *NSIS I Organizational Model Recommendations*

The NSIS I study looked at three general alternative organization forms including:

- **Multi-Institutional Alternatives:** includes local higher education brokerage centers (e.g., Montana's Higher Education Centers), extension upper-division programs in community colleges (e.g., Utah's University Centers), site-centered multi-inter-institutional consortia (e.g., South Carolina's Greenville University Center), and upper-level university branch campuses (e.g., University of Washington, Bothell, Arizona State University West).
- **Single Institution Alternatives:** includes four-year institution with telecommunications (e.g., California State University at Monterey Bay), baccalaureate-granting community college (e.g., Utah Valley State College).
- **Virtual University:** such as the Western Governor's University.

These alternative forms were evaluated and rated by the PCT and PAG, based on 15 criteria deemed most important by both the PCT and PAG. The recommended approach to the organizational model is a "transition consortia model," involving a staged response.

4. *NSIS I Recommendations on the Use of Technology*

The following recommendations were offered in the context of the organizational alternatives.

- Expand upon the use of Internet and the World Wide Web to deliver courses.
- As appropriate, multiple technologies should be employed in distance education courses; e.g., a two-way video course can be enhanced significantly if the resources of the Internet also are included.
- Area institutions should assess the needs of the private sector and design, with their involvement, training and staff development programs to be delivered remotely.
- Area program planning should provide for programs offered by one institution and delivered to students anywhere in the state via the K-20 Network.
- The response to area needs should include centers for learning in communities where there are a high number of disadvantaged students or students that are far from area population centers.
- Area institutions should continue to expand the number and type of courses offered in a distance education format. All courses should be analyzed to see if they could effectively be delivered to students at sites other than the campus where the course originates.
- Ensure that all courses offered in a telecommunications format can fit within the parameters of the K-20 Network.
- Consider setting percentage targets that are to be met via technological methods that avoid time and place constraints for students and minimize facility requirements. The following targets may be considered:

Technology Targets % of Students Utilizing Technology

<u>Year</u>	<u>Lower-Division</u>	<u>Upper-Division</u>	<u>Graduate</u>
2005	10%	10%	5%
2010	20%	15%	10%
2020	25%	20%	15%

IV. EXISTING HIGHER EDUCATION RESOURCES IN THE SERVICE AREA

Several consortium member institutions currently have a presence and history of meeting higher education needs within the service area. These institutions offer a variety of programs available to residents at community college main campuses, centers and other leased sites. These sites are shown on the following map, Existing Campuses, Centers and Program Sites, and are linked to an index of specific programs offered at each location.⁹

The forecast enrollments of over 9,000 lower- and upper-division FTE represent a significant increase in demand for higher education programs and services. Forecast lower-division enrollments of roughly 4,800 FTE represent a 50% increase over existing state-funded enrollments of 11,700 FTE over the next 20 years. Current enrollments for state-funded, running start, contract and foreign students, as well as the current percentage of distance education FTE, by site, are shown in the attached table, Current Community College Enrollments.

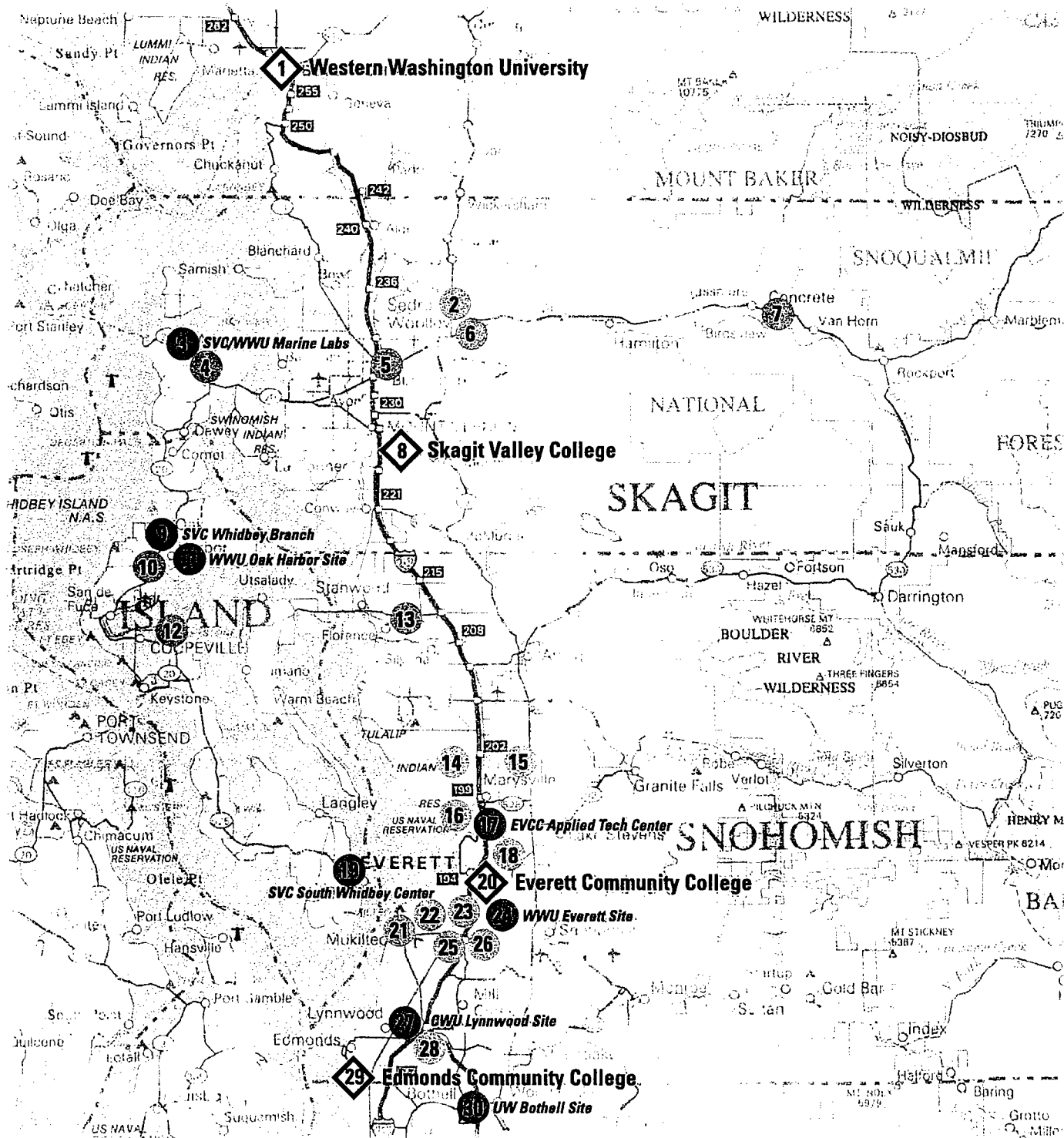
Lower-division distance education FTE comprise roughly 3.5% of the total study area enrollments in 1996-1997; greater than the statewide average of 1.6% for state-funded FTEs over the same time period. Additionally, planned higher education programs include community college on-line degree programs.

Currently, Central Washington University and Western Washington University offer programs in the study area. CWU offers accounting, business administration and law and justice programs on or near the Edmonds Community College campus. Enrollments for 1996-1997 exceeded 300 FTE. WWU offers programs at both the Skagit Valley College (SVC) main campus and the Oak Harbor Center. Enrollments at the SVC main campus for the 1996-1997 were roughly 560 FTE. The WWU Annex at SVC Oak Harbor serves 50 students in the Elementary Education Program and nearly 40 students in the Human Services Program. Western Washington University also offers both BA and Masters programs at Everett Community College, including the Woodring College of Education.

Finally, other private institutions offer programs in the area including Henry Cogswell College and City University.

⁹ Based on "Public Higher Education in Washington State Site for Learning: Programs and Locations," prepared for the Interinstitutional Committee of Academic Officers, L. Fox, July 25, 1997.

Existing Public Higher Education Resources



Main Campus



Community College Center



Distance Learning (SVC)



4-Year College Site



**Continuing Ed, Vocational Programs,
Apprenticeship, Community Programs**

Index of Sites and Programs

Existing Public Higher Education Resources

1	Western Washington University Campus	WWU	Main Campus Programs
2	Sedro Woolley High School	Skagit Valley College (SVC)	Limited Course Offerings (Japanese Course)
3	Sundquist Laboratory (Anacortes)	SVC and WWU	Marine Laboratory
4	Anacortes Public Library	SVC	Distance Education
5	Burlington Public Library	SVC	Distance Education
6	Sedro Woolley Public Library	SVC	Distance Education
7	Concrete Public Library	SVC	Distance Education
8	Mount Vernon	SVC	Main Campus Programs, NW WA Electrical Workers–Joint Apprenticeship, NW WA Painting–Joint Apprenticeship & Training, Public Schools–Apprenticeships
9	Whidbey (Oak Harbor)	SVC	Branch Campus Programs
10	Oak Harbor Public Library	SVC	Distance Education
11	Skagit Valley College (Oak Harbor)	WWU	BA in Education and Certification, Human Services
12	Coupeville Public Library	SVC	Distance Education
13	Stanwood Public Library	SVC	Distance Education
14	Tulalip Reservation	Everett Community College (EVCC)	Basic Skills, Limited Course Offerings
15	Marysville	EVCC	Vocational Programs
16	Naval Station (Everett)	EVCC	Limited Course Offerings
17	Applied Tech Center	EVCC	Continuing Education, Vocational Programs
18	Everett	Bellingham Technical College (BTC)	Apprenticeship Programs
19	South Whidbey Center (Clinton)	SVC	Academic Transfer, Community Education, Student Services, Distance Education
20	Everett Community College	EVCC	Main Campus Programs
21	Everett	Clover Park Technical College (CPTC)	Apprenticeship Programs
22	Applied Tech Center	Edmonds Community College (ECC)	Technical Degrees
23	Paine Field	EVCC	Professional and Technical Degrees
24	Everett Community College	WWU	BA: Education & Certification and Human Services MED: Adult Education
25	Everett	Shoreline Community College (SCC)	Vocational Program (Medical Lab Tech Clinics)
26	Everett	Renton Technical College (RTC)	Apprenticeship Programs
27	Lynnwood Center	Central Washington University (CWU)	BS: Accounting, Business Administration BA: Law and Justice
28	Lynnwood	SCC	Vocational Program (Medical Lab Tech Clinics)
29	Edmonds Community College	ECC	Main Campus Programs
30	Bothell Campus	University of Washington (UW)	

Current Community College Enrollments

Based on 1996 - 1997 Enrollments

EDMONDS COMMUNITY COLLEGE		EVERETT COMMUNITY COLLEGE					SKAGIT VALLEY COLLEGE					STUDY AREA TOTAL	
Main Campus		Main Campus		Paine Field		Mrysville Csmtdg		Main Campus		Oak Harbor		Clinton Harbor	
		Total	Campus	ATTC	Field	Csmtdg		Total	Campus	Harbor	Clinton	Harbor	
Lower Division FTE *	4,494	3,875	3,735	1	84	55		3,333	2,432	801	45	55	11,702
Transfer Percent*	24.0%	17.6%	18.0%	0.0%	5.0%	0.0%		23.2%	0.0%	0.0%	0.0%	0.0%	
Program Mix*													
Academic FTE	2,049	1,592	1,591	.	1	.		1,480	936	473	19	51	5,121
Vocational	1,425	1,331	1,191	1	83	55		1,140	890	238	12	.	3,896
Basic Skills	1,020	952	952	.	.	.		713	606	90	13	4	2,685
	4,494	3,875	3,735	1	84	55		3,333	2,432	801	45	55	11,702
Headcount**													
FTE/Headcount Ratio	11,015	10,810	10,651	16	79	62		8,437	5,745	2,156	235	301	30,262
	0.41	0.36	0.35	0.06	1.06	0.89		0.40	0.42	0.37	0.19	0.18	0.39
Distance Education FTE	89	48	48	0	0	0		275	238	26	5	6	412
Percent of Total FTE	2.0%	1.2%						8.3%					3.5%
Non-State Supported FTEs!													
Running Start	229	253	253	0	0	0		481	379	81	21	0	963
Self Supporting	330	53	43	10	0	0		249	219	20	10	0	632
Other Contracted	855	111	111	0	0	0		250	250	0	0	0	1,216
	1,414	417	407	10	0	0		980	848	101	31	0	2,811

Note: Edmonds CC FTE include students attending ATTC operated by Everett CC
 * State funded annual FTEs, transfer percent, and program mix per SBCTC & Community Colleges (1997)
 ** State funded annual headcount (totals) per SBCTC Academic Year Report (1997)
 ! Non-state supported FTEs per Community Colleges (1997)

V. BACCALAUREATE AND COMMUNITY COLLEGE PROGRAM NEEDS AND PLANS

PREFACE

The following section has been prepared by participating members of the consortium.

A. Baccalaureate Institution Program Plans and Organizational Structure

1. Introduction

The College and University Centers, developed by a consortium of seven higher education institutions, are dedicated to increasing access to educational opportunities for residents of North Snohomish, Island, and Skagit Counties. During the next decade, the centers will develop, coordinate, and promote high quality degree and continuing professional education programs at the associate, baccalaureate, and graduate levels. By building upon the complementary strengths of participating institutions, the centers provide this region--and ultimately Washington State--with a community-based model for extending educational opportunities to underserved students.

The three participating community colleges--Edmonds Community College, Everett Community College, and Skagit Valley College--will meet the lower-division curriculum needs of Associate Degree students who intend to pursue baccalaureate degrees. These programs will be fully articulated with upper-division programs offered through the College and University Centers, and will allow students to transfer directly from an Associate of Arts (A.A.) degree program to a baccalaureate institution. The community colleges will also offer sub-baccalaureate professional-technical and workforce training programs, some of which may articulate with College and University Center baccalaureate degree offerings.

The four participating baccalaureate institutions--Central Washington University, University of Washington, Washington State University, and Western Washington University--will serve the needs of students who wish to pursue baccalaureate and graduate programs without having to leave the NSIS region. In addition, the baccalaureate institutions and the community colleges will collaboratively plan continuing education programs provided through the center in ways compatible with each sector's strengths, existing efforts, and community needs. Through inter-institutional cooperation and diverse modes of educational delivery, including day, evening, and weekend classes as well as distance and networked education, the College and University Centers will serve working adults and other students for whom ease of access is of paramount concern.

The participating institutions will establish College and University Centers at four primary sites: at the three community colleges, and at a facility located in the North Everett/South Marysville Center. In addition to these locations, several community college remote sites (e.g., Oak Harbor, Clinton) will offer selected College and University Center programs to these communities. While most College and University Center programs will be available on-site, especially during the first phase of the initiative, workplace and home-based programs will also be critical to meeting the educational needs of the NSIS region.

The College and University Centers initiative represents an opportunity for the residents of this tri-county region and the partner institutions to develop program plans and governance structures that are based upon collaboration and the unique strengths of each participating institution. The evolution of this structure is important for two reasons: 1) it allows the values of the College and University Centers and their respective communities to be reflected among each institution's highest priorities, and 2) it provides the opportunity to experiment with a model of cooperative delivery of higher education that can be replicated in other underserved areas statewide. As Washington's public higher education institutions address access issues in other parts of the state, e.g., Jefferson and Okanogan Counties, the approaches being piloted in the NSIS region will be increasingly relevant statewide.

2. *Assessing Higher Education Needs in the NSIS Region*

Participating institutions are committed to building programs--and related delivery methods--that are responsive to the needs of area residents. Many of these prospective students are working adults, who have had difficulty accessing more traditional forms of campus-based baccalaureate, graduate and continuing professional education. From the outset of this initiative, the institutions and project consultants have consulted extensively with NSIS residents, employers, and community leaders to assess the educational needs of this tri-county region.

Three comprehensive needs assessments have laid the foundation for the program plans that the institutions have subsequently developed for each College and University Center (described in Section II of this report). Each of the following surveys was conducted between October 1996 and November 1997:

- MGT of America, Inc. Final Report (includes employer survey)
- Training and Education Needs Assessment Survey of Boeing SPEEA Technical Unit Employees in Everett
- NSIS Target-Market Needs Assessment

The NSIS needs assessments asked a wide range of area employers and prospective students about their academic and professional preferences and aspirations. When viewed in their totality, several key common themes emerge from these studies:

- The needs of this region are quite diverse. Residents are interested in various associate, baccalaureate, and graduate degree programs, but also demonstrate high levels of interest in continuing professional education short courses and certificate programs. Program areas in highest demand include: education and human services, business, engineering, and computer science.
- Prospective students and employers are interested in having a range of program delivery options available to them. The surveys uncovered high levels of interest in evening and distance learning classes. The diverse and geographically diffuse population of the NSIS region thus argues for flexibility in program delivery methods--from degree completion programs offered at community college sites, to using technology to bring programs to students' workplaces and desktops.

3. *Addressing the Needs: Collaborative Program Plans*

Using needs assessment findings and ongoing dialogue with NSIS communities as a springboard for program planning, participating community college and baccalaureate institutions have worked together to develop complementary program plans for each College and University Center. In order to provide a common foundation for this planning process, the seven institutions developed a set of Guiding Principles for the NSIS College and University Center Initiative (see Appendix B). These principles are reflected in the institution's approach to program development and to collaborative governance.

Intended to serve approximately nearly 4,000 new student FTEs by the Year 2005, the initial program plans rely on the strengths of the participating institutions, both in terms of program content and delivery approaches. It is important to note that this commitment should be recognized as a means of creating *additional* access, and should not compete with or undermine the support of students who are currently enrolled or projected to enroll on the campuses.

In developing first-phase program plans, the institutions have elected to take an incremental approach, building first on programs already in place (e.g., Western Washington and Washington State University's presence at Skagit Valley College, and Central Washington University's presence at Edmonds Community College) and making use of existing facilities for the launch of the first set of new College and University Center programs. The institutions will therefore not need to wait for new facilities to be leased or built before they begin providing additional programs for NSIS-area students. In 1998-1999, institutions will use this infrastructure to offer new self-sustaining certificate programs, and to increase the numbers of students served by existing community college-based baccalaureate programs.

One important feature of these program plans is their experimental and flexible nature. By allowing for different program mixes at each College and University Center, they permit new partnerships--across institutions and between institutions and individual communities--to evolve as community demand for courses and programs grows and changes. No one program delivery approach, or set of programs, can possibly meet the needs of every community in this diverse region. It will therefore be critical for the institutions and communities involved at every College and University Center to conduct ongoing needs assessments--to ensure that center offerings are responding adequately to community demand.

4. *Detailed 1998-2005 Program Plans by College and University Center*

Please refer to Appendix C.

B. Community Colleges Lower-Division Program Plan

1. Introduction

The purpose of this plan is to identify the lower-division professional/technical programs and courses for the College and University Center. These programs and courses are in addition to the general statewide Associate (Transfer) Degree. The professional/technical programs and courses selected include:

- Existing college professional/technical and transfer degrees (ATA and AAS) and courses that are prioritized for initial delivery.
- Most likely professional/technical programs to be developed for delivery between 1999-2005 based upon program areas in planning, or the beginning stages for being offered.
- An appendix with all other existing and suggested future programs identified by the community colleges in their inventories of potential center programs and courses.

In addition, the plan provides a statement of understanding for offering continuing education courses within the framework of the center's operating and governing principles.

2. Selection of Professional/Technical Programs for the Center

a. Current/Existing Programs and Courses Prioritized

For development of this plan, the community colleges identified 32 existing professional/technical and transfer programs and courses. In addition they identified 40 future programs to support the College and University Center. Existing programs and courses were prioritized in order to identify areas that could be targeted for immediate development. The criteria used included:

- The same or a closely related program was identified by all 3 community colleges.
- The community colleges identified the program as a logical match for articulation or an articulation agreement existed for the program with a 4-year college.
- The 4-year colleges identified the program area as one of their degree programs of focus for the center.
- Customers identified the program as an area of interest for them in either the Boeing/SPEAA or Targeted Needs Surveys.

The table below identifies eight areas agreed upon by the community colleges for initial priority along with the degrees or courses currently offered:

<u>Program Area</u>	<u>Everett</u>	<u>Skagit Valley</u>	<u>Edmonds</u>
Business	ATA/AAS	ATA/Transfer courses	ATA/AAS
Computer Information Services	ATA/AAS	ATA	ATA/AAS
Human Services	AAS	ATA	ATA/AAS
Environmental Services	AAS/ATA	ATA/Transfer courses	Transfer courses
Multimedia Production	AAS-Production	ATA-Production Technology	ATA-Visual Communication
Engineering	AAS/ATA	Transfer courses	Transfer courses
Nursing	AAS	ATA	N/A
Early Childhood Education	ATA/AAS	ATA	ATA/Transfer courses

Please see Appendix D for Community College Program Plans by College and University Centers.

b. Suggested Future Program and Course Offerings

The following programs and courses have been identified by the community colleges for future offerings that most likely could be developed through Year 2005 for the College and University Center:

<u>Program/Course</u>	<u>Everett</u>	<u>Skagit Valley</u>	<u>Edmonds</u>
Medical Records	X	X	
Technical Writing	X		
Multi-media/Voice Technology	X	X	X
JAVA-Based Information Systems	X	X	X
Webmaster Information Systems		X	X
Wireless Communications		X	X

3. Continuing Education - Statement of Understanding

In accordance with the (draft) operating and governing principles for the College and University Center, the two-year colleges and four-year universities will collaboratively plan continuing education programs provided through the center in ways compatible with the strengths of each sector and campus partner.¹⁰ Collaborative planning will guarantee that continuing education programs and courses build upon the strengths of each sector and fit with their respective roles for providing lower and upper division courses. New programs will not duplicate or compete with existing efforts in the region for either sector.

¹⁰ Please see Appendix B, NSIS Guiding Principles.

VI. COMMUNITY AND UNIVERSITY CENTER ORGANIZATION MODEL

PREFACE

The following section has been prepared by participating members of the consortium.

A. The College and University Centers

Approximately every twenty years, the Washington State legislature has made substantial new investments in higher education to increase access for underserved communities. During the late 1940s, the expansion of access to Washington's network of baccalaureate institutions was the major focus. In the 1960s, the state's community college network was expanded to extend academic and vocational opportunities to more urban and rural areas. Most recently, during the 1980s, the state launched five new branch campuses to increase baccalaureate and graduate-level programs to several large and growing communities.

While these capital-intensive initiatives clearly succeeded in increasing access for residents of targeted communities, the fiscal constraints of the current era would make it impossible to continue building new full-service campuses statewide. However, by using existing facilities, collaborative program development, and the promise of instructional technology to the access issue, the College and University Center model may serve not only the needs of many NSIS students, but those of other Washington residents as well. While this concept is clearly not the only solution to meeting statewide access challenges, it has obvious possibilities as a scaleable model for serving working adults and other place-bound students across Washington.

Elements of a College and University Center

The College and University Centers will serve as the locus of sub-baccalaureate professional/technical and workforce training, baccalaureate, graduate, and continuing professional education programs via four primary sites in the NSIS region: Edmonds Community College (Lynnwood), Everett Community College, Skagit Valley College, and North Everett/South Marysville Center. Additionally, several established community college centers in outlying areas, namely Oak Harbor, Clinton, the Advanced Technical Training Center (ATTC), and Paine Field, will offer a subset of NSIS programs to their communities.

This localized approach will maximize the number of communities served while minimizing fixed capital expenditures. It will permit center sites—and the network of centers as a whole—to evolve in a way that makes sense for each community and for the region. In the long-term, this evolution may lead to the scenario outlined in this report. In the short-term, however, the College and University Center approach does not require a large infusion of capital funding.

The scope and focus of each College and University Center will be responsive to changing economic, demographic, community, and student goals. Each center's program offerings will be determined by the needs of the immediate community, with an eye toward complementing the mission and offerings of other college or university campuses already located in the area. Institution's participation in each College and University Center can be virtual, on-site, or some combination of the two, depending on program requirements and student needs.

During the first phase of this initiative, when programs and support activities will be offered out of existing and/or temporary leased space, the baccalaureate institution with an established presence in the community will be designated as the coordinating or convening institution for each College and University Center. Designated convening institutions for the NSIS Centers based at community college sites are: Central Washington University at Edmonds Community College and Western Washington University at Everett Community College, and either WWU or Washington State University at Skagit Valley College. The University of Washington will serve as the coordinating institution at the North Everett/South Marysville College and University Center.

In addition to functioning as instructional sites, the College and University Centers will offer support services for students and institutions. Access to such services will either be provided on-site, or at a distance as determined by participating institutions. The range and mix of services available on-site at each College and University Center will depend on the scope of a given center's programs and facilities. These services may include:

- Student services: admissions and financial aid, academic advising, career services.
- Access (on-site or on-line) to library resources.
- Computing facilities and other technical support systems.
- Presence of a site coordinator (who reports to the center's convening institution) to manage the facility and serve as chief liaison to the community and to all participating institutions.

Relationship between Community Colleges and Baccalaureate Institutions

One of the College and University Center model's most innovative features is the community colleges' role in "hosting" upper division and graduate programs delivered by the universities to local communities. There are obvious benefits to this relationship to the colleges and to their communities. However, participating institutions must work together to avoid adverse impacts on the community college campuses. The community colleges should not lose space or be required to diminish their own levels of service as a result of hosting university programs.

The presence of university activity on community college campuses should not cause community college expenditures on community college activities to increase; student services, library, and administrative functions will continue to be provided. But it may be cost-effective for the community college to provide services on a contractual basis to universities and their students, as determined by the parties and the unique circumstances of the arrangements that are made for the delivery of these instructional programs. Contractual agreements for specific services and space requirements will be worked out between the host community college and convening (baccalaureate) institution or the NSIS consortium. Edmonds Community College's experience with CWU has been very positive and provides a good model for such arrangements.

B. Interim Governance Model

The College and University Centers governance structure will reflect and sustain the high level of collaboration and creativity that have characterized this initiative to date. The structure will emphasize community-based needs assessment and program planning, while ensuring equity and strategic development at a regional level. In both the short and long term, oversight and governance of the centers will thus be founded upon three key principles:

- Institutional collaboration
- Community involvement
- Experimentation and flexibility

As the NSIS College and University Center model evolves during the next several years, so too will the shape and scope of its governance structure. The first phase of this initiative will rely heavily upon existing (or borrowed, in many cases) facilities, as well as established institutional presence in NSIS communities. Consequently, the participating baccalaureate institutions will begin developing governance mechanisms that are based in these strong and established collaborative relationships, but that are flexible enough to adapt to changes in program and capital approaches as the NSIS initiative unfolds. Rather than committing to a formal governance structure that might impede the “organic” evolution and growth of higher education activity in the NSIS region, the institutions will experiment with a structure that blends site-specific program development and needs assessment with region-wide as well as statewide oversight and coordination.

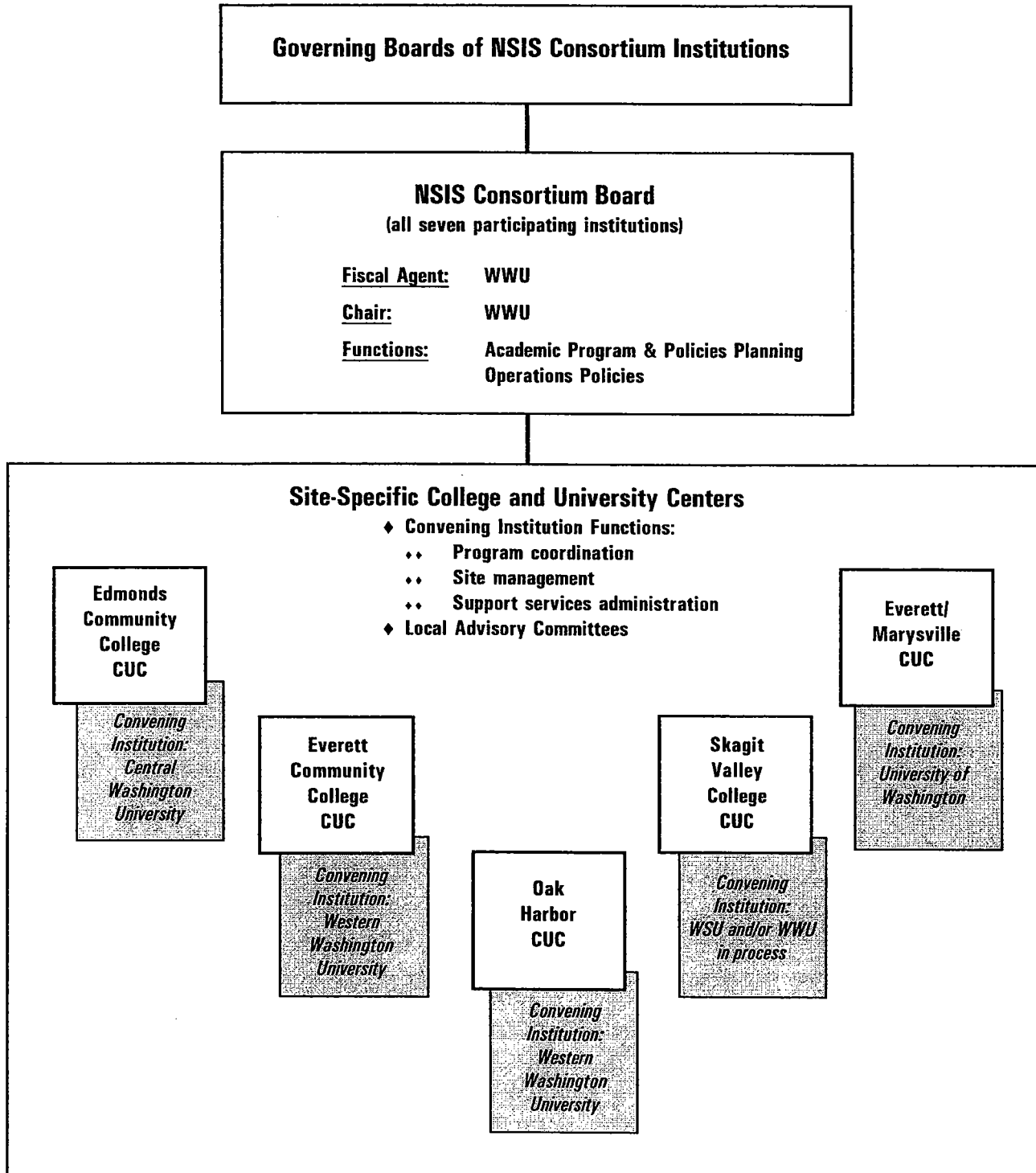
This interim structure is illustrated in the following diagram and described below.

Site-Specific Governance

Convening Institution

As described previously, a convening institution has been designated at each College and University Center for the first phase of this initiative. The convening institution will be responsible for site management, including facilities and the administration of academic support services. In addition, this institution will regularly convene and consult with the Center Curriculum Council described below.

NSIS College & University Centers Proposed Interim Organizational Structure



Local Advisory Boards

A Local Advisory Board will be established at each College and University Center site. These boards will be comprised of area residents with strong ties to business, industry, professions, and ethnic and cultural communities in the area. Advisory board members will assist the center's convening institution and curriculum council in assessing the educational needs of and forming linkages to the community served by the center.

The Local Advisory Boards will play an important role in developing and carrying out the center's initiatives related to legislative and community relations, resource development, marketing and outreach, evaluating community satisfaction with center programs, and generating community-based experiential learning opportunities for the center's students.

NSIS Regional Governance

NSIS Consortium Board

The NSIS College and University Centers, and other centers that may eventually be established in other regions, would relate to each other through the NSIS Consortium Board. The Board would be made up of the convening institutions of each the College and University Centers.

The NSIS consortium will incorporate the College and University Centers located in North Snohomish, Island, and Skagit Counties, and Western Washington University will act as the lead institution for the incorporated centers. This leadership will include acting as fiscal agent for the NSIS consortium, convening the NSIS Consortium Board.

Taking a regional perspective, the Board would assess the educational needs of the region served by the centers, consult about and oversee shifts in demand and related enrollment changes, develop and oversee joint operating budgets, and set common policies and procedures for administration of the centers as appropriate—including resolution of issues related to program duplication and facility constraints.

Consortium Relationship to Interinstitutional Committee for Academic Program Planning (ICAPP)

ICAPP is a committee of the Interinstitutional Commission of Academic Officers (ICAO), an academic policy board comprised of provosts from Washington state's public baccalaureate institutions. ICAPP was established by the provosts to provide a regular forum for coordinated program planning among the baccalaureate institutions. Both ICAO and ICAPP are administered by the Council of Presidents.

The NSIS Consortium Board might in effect be a subset of the full ICAPP membership, and would thus maintain an information-sharing relationship to this body in the context of statewide academic planning efforts. ICAPP would thus serve as a forum for multi-institutional discussion and planning about coordination of efforts statewide.

B. Case Studies Summary

Case studies of nearly a dozen, functioning consortia show that the State, and the NSIS study area, are not unique in facing a growing demand for higher education programs from non-traditional, place-bound and working students. The case studies also show a varied response to the demand, in terms of programs, facilities and organizational structures, based on unique, local circumstances. The benefit of the case studies to the NSIS study may be in alerting the PCT, PAG and HECB to development opportunities, as well as “lessons learned” by consortia that have taken their first steps.

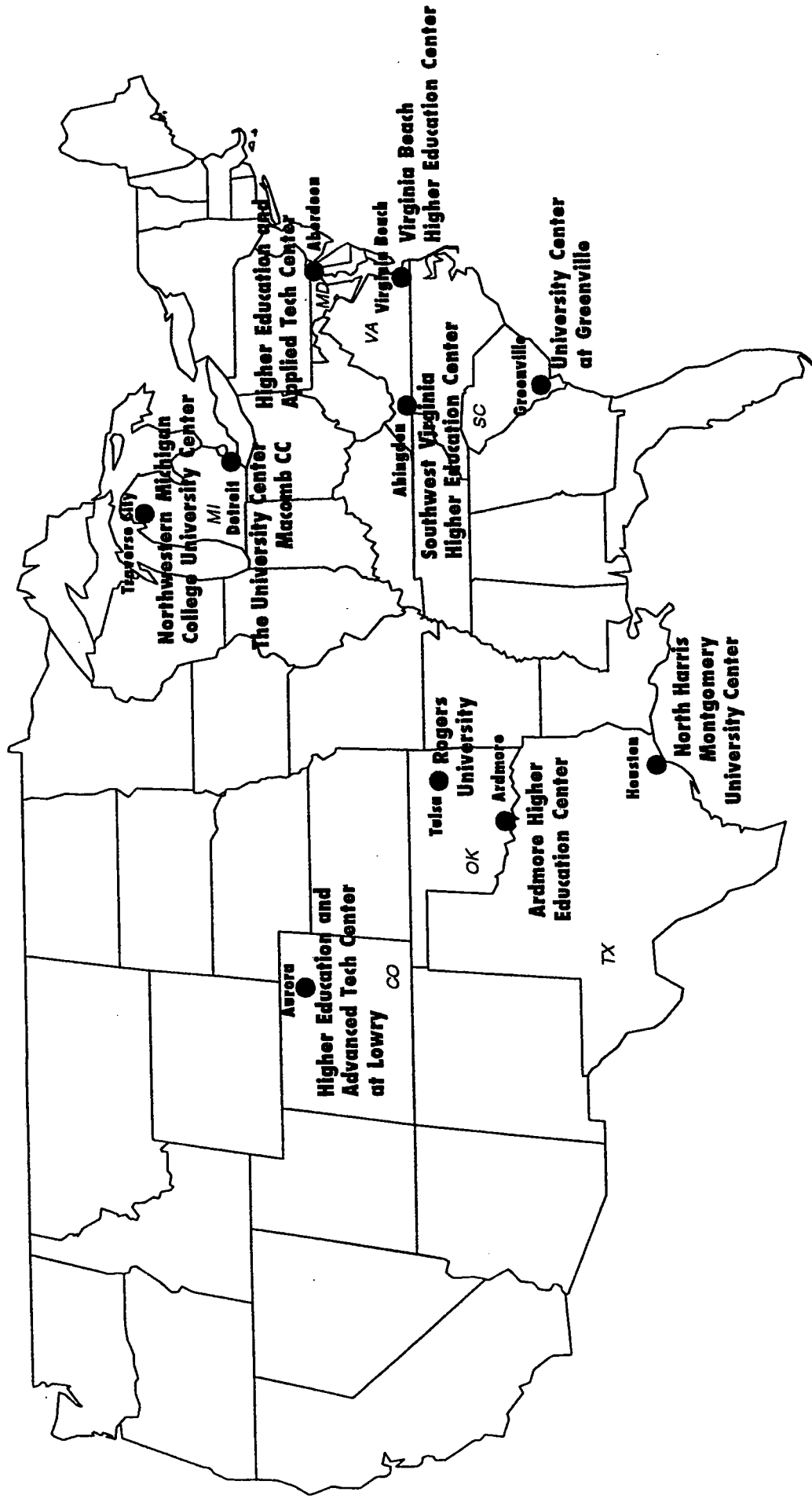
The consortia selected for interviews were those with a primary mission to serve “non-traditional” place-bound and working students with upper-division and graduate programs. Interviews with key persons from nine consortia led to the following summary information.¹¹

1. Institutional Description

- Nine consortia interviewed with a wide range of member institutions; most established in the 1990's, although Ardmore Higher Education Center dates to 1974.
- Primarily serving placebound, continuing or returning students and offering upper-division and graduate programs, with peak hours of instruction in late afternoon and evening.
- Mission of all consortia is to provide higher educational opportunities for residents of a certain area or region. Other specific intents include the provision of:
 - Professional and specialized training (Southwest Virginia Higher Education Center)
 - An alternative to going away to college or attending an isolated university extension center
 - Student, business and industry access to leading edge technologies (Higher Education & Advanced Tech Center at Lowry)
 - Opportunities for collaborative venture between public and private sectors, to serve citizens and economic development needs of the region (Higher Education & Applied Tech at Maryland)
- A variety of methods for program planning include:
 - Board of Directors (CEO and representatives from member institutions) plus input from community advisory group
 - Weekly meetings of member institution representatives
 - Academic programming council
 - Members offer non-duplicated programs; lead institution as final arbitrator

¹¹ Please see Appendix E, Consortia Case Studies for the matrices that support these summaries.

Consortia Case Studies



2. *Facility Description*

- Nearly half of the consortia facilities are located adjacent to existing community colleges, some share facilities such as libraries, labs.
- Facilities are primarily newly constructed, with only two being refurbished facilities; new facility size ranges from 25,000 to 90,000 gsf on 10 to 40 acres of land.
- Rough estimates of ASF/FTE range from a low of 20 ASF/FTE to high of 96 ASF/FTE.
- Keys to keeping size low in these early phases of development include:
 - Electronic libraries
 - Minimal administrative staff and office sharing by faculty
 - Minimal lab facilities or sharing with adjacent community colleges
 - Minimal student service areas due to reliance on electronic registration, payment of fees, video/ITV conferencing and counseling
 - No child care, health & fitness, cafeteria, etc. for commuters in early phases

3. *Space Types*

- Libraries/Learning Resource Centers
 - Nearly all consortia have minimal library facilities, from 2,000 to 10,000 SF
 - Consortia rely on: electronic catalogue, databases, search and retrieve systems at state, consortium, university or community college level; hard copy distribution systems (e.g., TEXSHARE, VIVA) or inter-library loan systems; adjacent or nearby community college or public libraries; digital publications
- Classrooms, Labs and Computer Labs
 - Nearly all consortia offer ITV classrooms
 - Half of the facilities include lecture/auditorium type spaces or conferencing centers
 - Few Wet Labs: wet labs are provided at consortium facilities offering lower-division programs (Higher Education and Advanced Tech Center at Lowry, Ardmore Higher Education Center); small wet labs (i.e., 10–16 stations) offered at Southwest Virginia Higher Education Center, Higher Education Applied Tech Center
 - Two of the consortium share wet lab facilities at adjacent community college campuses
 - Computer Labs: All consortia have open computer lab facilities (50–70 stations)
- Faculty and Administration Spaces
 - Full-time vs. part-time faculty status varies widely; on-site vs. half-time commuting faculty varies
 - Only 3 of the consortia offer dedicated faculty space for full or 50% faculty; space sharing occurs in variety of methods: shared office suites; dedicated suite per each university or member institution; shared computers, conference and prep areas
 - Minimal amount of FT staff (i.e., 4–8 FT staff) and dedicated space for staff

- Student Services
 - Minimal student service space; most rely on electronic support from main campuses including kiosk systems, on-line registration and fee payment, and video/ITV conferencing, counseling and degree planning
 - Child care, health & fitness facilities generally not offered
 - Half of consortia offer vending services on campus

4. *Capital Costs*

- Nearly half of the consortia benefit from publicly owned and/or donated land
- Variety of methods for initial capital funding, including:
 - State capital bonds
 - Endowment funds
 - Community college district bonds
 - County levies
 - Foundation grants & private sector contributions
 - Student fees

5. *Operating Costs & Revenue Sharing*

- Costs and revenues shared in variety of ways:
 - Institutions lease space from center
 - Center collects tuition, reimburses member institutions
 - State appropriations for operating costs
 - Initial operating budget funded by grants
 - Annual base fee paid by member institutions, applied against credit hour charges
- Some consortia have forecast revenues through rental of the facilities during daytime for conferencing and industry workforce training; it is uncertain how successful this has been.
- Variety of methods for collecting, distributing tuition; member institutions are responsible for registering and collecting tuition in at least half of the consortiums.

6. *Distance Learning & Technology*

- Wide range of technologies used with emphasis on 2 way teleconferencing, 1 way broadcast, Internet course delivery.
- Percentage of program delivery occurring off-site ranges from less than 5% to 25% of students; and up to 40% of students receive tech-enhanced instruction on-site.
- All or most centers are intent on upgrading on-site campus network infrastructure (e.g., fiber optic, network, upgrades to server capacity, increase in band width, increase in ITV capacity).
- Only three centers are producing technology-enhanced program materials.
- Several centers are currently working with or exploring the use of private and public/private institutions (e.g., Real Education, University of Phoenix, Jones International, Western Governors University) for a portion of program development, administration or student service assistance.
- Several consortia have established relationships with equipment, software or systems integrators to serve as technology showcase sites in return for donated equipment.
- Training for faculty is largely the responsibility of member institutions.
- Few consortiums are making distance education projections; many in planning stages or following statewide initiatives.
 - One consortium identified a 60% on-line learning goal or target
 - Most consortium emphasize technology-enhanced instruction
 - All centers are using some level of electronic student services
- Widespread recognition that technology potentially reduces some administrative personnel and facility needs and costs, but these may be offset by infrastructure and equipment replacement, and technology support costs.

VII. PLANNING ASSUMPTIONS

A number of related assumptions are needed to determine how to serve the projected enrollments in multiple settings over a 20 plus year time frame. The planning assumptions derived over the course of the study include:

- **FTE Adjustments:** Adjustments made to the NSIS I forecast enrollments are intended to account for “other providers,” “ramp-up,” and future Running Start students.
- **Distribution of Enrollments or FTE:** The adjusted forecast enrollments are distributed across Community College campuses and the new center based on program plans and demographic analyses.
- **Tailored Space Planning Model including Technology Assumptions:** Existing space planning models (i.e., type and amount of space needed per FTE) are tailored to meet consortium program delivery goals. The tailored space planning model incorporates assumptions regarding the degree to which programs are delivered via technology and distance education.
- **“Normative Space Needs”:** The types and amount of academic space and parking needed to serve the additional enrollments are estimated for each campus and center, without regard to existing campus conditions.
- **Parking Assumptions:** Parking is a critical issue in planning most campuses; this section describes the assumptions used to determine the number of stalls needed to serve the enrollments, including FTE to headcount conversion factors, student concentration, and delivery mode split.

A. FTE Adjustments: Other Providers, Ramp-Up and Running Start

The forecast, target enrollments identified in the NSIS I needs assessment are adjusted for three factors: “other providers,” “ramp-up” and running start students, as described below.

“Other providers” refers to higher education service providers other than the state, such as technical and vocational schools, private institutions and distance education providers (including out-of-state providers). The forecast enrollments are adjusted downward by 14% to account for other providers within the service area.

“Ramp-up” reflects a phased approach to meeting the forecast upper-division enrollments to be served by the state institutions within the study area. Ramp-up assumes that 85% of the forecast upper-division enrollments, excluding those served by other providers, will be served in the Year 2005, 95% in Year 2012, and 100% in Year 2020.

Finally, an estimate of additional running start students is included in this analysis due to the great success and high demand for this program by the local community and legislature, and in order to provide adequate space for these students. To date, the community colleges accommodate running start students within existing facilities. Growth projections for running start students are uncertain; for planning purposes, running start students are assumed to nearly double by the Year 2020.

The impact of these factors is shown in the Student FTE Planning Assumptions table. The NSIS I study identifies enrollment targets of 4,598 additional FTE in Year 2005, and growing to 10,515 additional FTE by the Year 2020 (i.e., including running start). Adjusted for other providers and ramp-up, the enrollment to be accommodated by the consortium is 3,740 additional FTE in Year 2005, and growing to 9,150 additional FTE by the Year 2020. This is an adjustment of 858 FTE in Year 2005 and 1,365 FTE in Year 2020 and represents a 20% difference from the NSIS I study FTE in the near term, and 13% difference by the Year 2020.

Student FTE Planning Assumptions

Public Sector Upper Division Ramp-Up:	<u>Year</u>	<u>% of Goal</u>
% of Residual Part. Rate Met by Yr/Phase	2005	85%
	2012	95%
	2020	100%

	<u>2005</u>	<u>2012</u>	<u>2020</u>	<u>Total</u>
Lower Division				
Part Rate Target FTE	2,270	1,591	932	4,793
Running Start FTE Adjustment	<u>277</u>	<u>150</u>	<u>152</u>	<u>579</u>
Total FTE	2,547	1,741	1,084	5,372
Other Provider Share of Part Rate FTE	14%	14%	14%	14%
Other Provider FTE	311	219	128	659
Consortium Lower Division FTE	2,236	1,522	956	4,713
Upper Division/Graduate				
Part Rate Target FTE	2,051	1,991	1,101	5,143
Other Provider Share	14%	14%	14%	14%
Other Provider FTE	281	274	152	707
Residual Part Rate Target FTE	1,770	1,717	949	4,436
Consortium FTE (per ramp-up)	1,504	1,884	1,048	4,436
Total Upper Division FTE Accomodated	1,786	2,157	1,200	5,143
Total Net New Consortium FTE	3,740	3,405	2,004	9,150
CUMULATIVE FTE				
Part Rate Target FTE	4,598	8,330	10,515	NA
(with Running Start FTE)				
Other Provider FTE	592	1,085	1,365	NA
Consortium FTE	<u>3,740</u>	<u>7,146</u>	<u>9,150</u>	<u>NA</u>
Total	4,333	8,230	10,515	NA
% of Enrollment Goal	94%	99%	100%	NA

B. Distribution of Enrollments or FTE

The distribution of the adjusted forecast enrollments across the existing community college campuses and centers and the new center is needed in order to estimate the required academic building space and parking, and associated capital costs for facilities at each site. (The NSIS I forecast enrollments were identified for the entire study area, not by community college district or campus.)

The FTE distribution tables identify forecast enrollments for the Years 2005, 2012 and 2020 by site and by division, with lower-division including running start, and upper-division including graduate level FTE. Contract and foreign students are not included in this analysis for state funded facilities.

System-wide, the lower-division enrollments are assumed to continue to receive instruction at the community college main campuses and centers. In the near term, two thirds of the 1,504 upper-division enrollments are envisioned to receive instruction primarily at the community colleges, with the remaining 450 FTE allocated to the new center. After the Year 2005, future upper-division enrollments are “unallocated.” For planning purposes, the space and facilities needed to serve these “unallocated” students is assumed to be new, such as at the new center, since the community college sites are largely at capacity with lower-division growth. (Subsequent sections of this report describe the facility and cost implications of alternative distributions of FTE.)

1. Lower-Division Assumptions

The distribution of lower-division enrollment is based on forecast population growth within sub-areas of the study area. As seen in the tables, Everett Community College is anticipated to receive the largest share of the lower-division forecast enrollments due to the significant, continued population growth expected in south Snohomish County; Skagit Valley College is a close second. Edmonds Community College is allocated a much smaller share of the total forecast enrollment; despite the fast growing south Snohomish County area, the Edmonds Community College District comprises a small portion of the consortium study area.¹²

The process for distributing lower-division forecast enrollments involved:

- A breakout of countywide forecast enrollments across smaller sub-areas, using NSIS I needs assessment projections and sub-area population growth projections gathered from County agencies.
- Community College direction regarding program plans at main campuses.
- State Board of Community and Technical College (SBCTC) final allocation of FTE across the main campuses and centers.

¹² Please note that the consortium service area represents roughly 10% of EdCC's total, district-wide lower-division growth.

2. *Upper Division Assumptions*

Upper division enrollment distribution has been estimated based on the program plans compiled by the PCT. The proposed distribution shows an initial 450 FTE new center. The value of this approach is described in Section V, Program Plans.

An alternative method to distribute upper-division enrollment was explored prior to the completion of the program plans. This alternative method used lower-division transfer rates at the existing community college as the basis for upper-division enrollments to be served on the community college campuses. This alternative resulted in significantly smaller numbers of upper-division FTE on the community college campuses, and a larger new center, even with modest increases in transfer rates that may be realized once upper-division courses are offered at these sites. However, the program plan approach is considered to be the more community-responsive approach to FTE distribution.

FTE Distribution

YEAR	2005	Add'l Lower Division FTE	EdCC		EvCC			SVC					Site Independ. or Unalloc.	TOTALS
			Main Campus	Total	Main Campus	ATTC	Paine		Main		Oak	Clinton		
							Field	Csmtlgy	Campus	Campus				
			67	73	73	.	.	.	139	110	23	6		278
		Running Start	135	1,067	982	11	53	21	756	514	219	23		1,958
		Lower Division	201	1,140	1,055	11	53	21	894	624	242	28		2,236
		Consortium FTE												
		* District-wide Growth	2,301											
		Add'l Upper Division FTE	430	270	237	32	.	.	300	195	93	12	55	450
														1,504
		Add'l Lower Division FTE	36	39	39	.	.	.	75	59	13	3		150
		Running Start	101	722	664	7	36	14	549	373	159	16		1,372
		Lower Division	137	761	703	7	36	14	624	433	172	20		1,522
		Consortium FTE												
		* District-wide Growth	282											
		Add'l Upper Division FTE											.	1,884
														1,884
		Add'l Lower Division FTE	36	39	39	.	.	.	75	59	13	3		150
		Running Start	50	419	386	4	21	8	336	229	98	10		806
		Lower Division	86	459	425	4	21	8	411	288	110	13		956
		Consortium FTE												
		* District-wide Growth	332											
		Add'l Upper Division FTE											.	1,048
														1,048
		Add'l Lower Division FTE	139	152	152	.	.	.	288	228	48	12		579
		Running Start	286	2,208	2,032	22	110	44	1,641	1,116	476	49		4,135
		Lower Division	424	2,360	2,184	22	110	44	1,930	1,344	524	61		4,714
		Consortium FTE												
		* District-wide Growth												
		Add'l Upper Division FTE											.	1,048
														1,048
		Add'l Lower Division FTE	139	152	152	.	.	.	288	228	48	12		579
		Running Start	286	2,208	2,032	22	110	44	1,641	1,116	476	49		4,135
		Lower Division	424	2,360	2,184	22	110	44	1,930	1,344	524	61		4,714
		Consortium FTE												
		* District-wide Growth												
		Add'l Upper Division FTE											.	1,048
														1,048
		Add'l Lower Division FTE	139	152	152	.	.	.	288	228	48	12		579
		Running Start	286	2,208	2,032	22	110	44	1,641	1,116	476	49		4,135
		Lower Division	424	2,360	2,184	22	110	44	1,930	1,344	524	61		4,714
		Consortium FTE												
		* District-wide Growth												
		Add'l Upper Division FTE											.	1,048
														1,048
		Add'l Lower Division FTE	139	152	152	.	.	.	288	228	48	12		579
		Running Start	286	2,208	2,032	22	110	44	1,641	1,116	476	49		4,135
		Lower Division	424	2,360	2,184	22	110	44	1,930	1,344	524	61		4,714
		Consortium FTE												
		* District-wide Growth												
		Add'l Upper Division FTE											.	1,048
														1,048
		Add'l Lower Division FTE	139	152	152	.	.	.	288	228	48	12		579
		Running Start	286	2,208	2,032	22	110	44	1,641	1,116	476	49		4,135
		Lower Division	424	2,360	2,184	22	110	44	1,930	1,344	524	61		4,714
		Consortium FTE												
		* District-wide Growth												
		Add'l Upper Division FTE											.	1,048
														1,048
		Add'l Lower Division FTE	139	152	152	.	.	.	288	228	48	12		579
		Running Start	286	2,208	2,032	22	110	44	1,641	1,116	476	49		4,135
		Lower Division	424	2,360	2,184	22	110	44	1,930	1,344	524	61		4,714
		Consortium FTE												
		* District-wide Growth												
		Add'l Upper Division FTE											.	1,048
														1,048
		Add'l Lower Division FTE	139	152	152	.	.	.	288	228	48	12		579
		Running Start	286	2,208	2,032	22	110	44	1,641	1,116	476	49		4,135
		Lower Division	424	2,360	2,184	22	110	44	1,930	1,344	524	61		4,714
		Consortium FTE												
		* District-wide Growth												
		Add'l Upper Division FTE											.	1,048
														1,048
		Add'l Lower Division FTE	139	152	152	.	.	.	288	228	48	12		579
		Running Start	286	2,208	2,032	22	110	44	1,641	1,116	476	49		4,135
		Lower Division	424	2,360	2,184	22	110	44	1,930	1,344	524	61		4,714
		Consortium FTE												
		* District-wide Growth												
		Add'l Upper Division FTE											.	1,048
														1,048
		Add'l Lower Division FTE	139	152	152	.	.	.	288	228	48	12		579
		Running Start	286	2,208	2,032	22	110	44	1,641	1,116	476	49		4,135
		Lower Division	424	2,360	2,184	22	110	44	1,930	1,344	524	61		4,714
		Consortium FTE												
		* District-wide Growth												
		Add'l Upper Division FTE											.	1,048
														1,048
		Add'l Lower Division FTE	139	152	152	.	.	.	288	228	48	12		579
		Running Start	286	2,208	2,032	22	110	44	1,641	1,116	476	49		4,135
		Lower Division	424	2,360	2,184	22	110	44	1,930	1,344	524	61		4,714
		Consortium FTE												
		* District-wide Growth												
		Add'l Upper Division FTE											.	1,048
														1,048
		Add'l Lower Division FTE	139	152	152	.	.	.	288	228	48	12		579
		Running Start	286	2,208	2,032	22	110	44	1,641	1,116	476	49		4,135
		Lower Division	424	2,360	2,184	22	110	44	1,930	1,344	524	61		4,714
		Consortium FTE												
		* District-wide Growth												
		Add'l Upper Division FTE											.	1,048
														1,048
		Add'l Lower Division FTE	139	152	152	.	.	.	288	228	48	12		579
		Running Start	286	2,208	2,032	22	110	44	1,641	1,116	476	49		4,135
		Lower Division	424	2,360	2,184	22	110	44	1,930	1,344	524	61		4,714
		Consortium FTE												
		* District-wide Growth												
		Add'l Upper Division FTE											.	1,048
														1,048
		Add'l Lower Division FTE	139	152	152	.	.	.	288	228	48	12		579
		Running Start	286	2,208	2,032	22	110	44	1,641	1,116	476	49		4,135
		Lower Division	424	2,360	2,184	22	110	44	1,930	1,344	524	61		4,714
		Consortium FTE												
		* District-wide Growth												
		Add'l Upper Division FTE											.	1,048
														1,048
		Add'l Lower Division FTE	139	152	152	.	.	.	288	228	48	12		579
		Running Start	286	2,208	2,032	22	110	44	1,641	1,116	476	49		4,135
		Lower Division	424	2,360	2,184	22	110	44	1,930	1,344	524	61		4,714
		Consortium FTE												
		* District-wide Growth												
		Add'l Upper Division FTE											.	1,048
														1,048
		Add'l Lower Division FTE	139	152	152	.	.	.	288	228	48	12		579
		Running Start	286	2,208	2,032	22	110	44	1,641	1,116	476	49		4,135
		Lower Division	424	2,360	2,184	22	110	44	1,930	1,344	524	61		4,714
		Consortium FTE												
		* District-wide Growth												
		Add'l Upper Division FTE											.	1,048
														1,048
		Add'l Lower Division FTE	139	152	152	.	.	.	288	228	48	12		579
		Running Start	286	2,208	2,032	22	110	44	1,641	1,116	476	49		4,135
		Lower Division	424	2,360	2,184	22	110	44	1,930	1,344	524	61		4,714
		Consortium FTE												
		* District-wide Growth												
		Add'l Upper Division FTE											.	1,048
														1,048
		Add'l Lower Division FTE	139	152	152	.	.	.	288	228	48	12		579
		Running Start	286	2,208	2,032	22	110	44	1,641	1,116	476	49		4,135
		Lower Division	424	2,360	2,184	22	110	44	1,930	1,344	524	61		4,714
		Consortium FTE												
		* District-wide Growth												

* District-wide growth represents total additional, state funded lower division "FTE"s (excluding running start students) for Edmonds Community College, whose boundaries beyond the NSIS service area; district-wide growth are not accommodated in the space needs, development plans or capital costs for the NSIS

C. Tailored Space Planning Model

The space planning models currently used by the community colleges and baccalaureate institutions for facilities planning and funding purposes were reviewed and found to be largely inappropriate for use in planning for the consortium. Furthermore, the standards used for community colleges and baccalaureate institutions differed greatly. Therefore, a space planning model tailored to meet the goals and intent of the consortium in terms of classroom utilization, activities occurring off-site, and the use of technology was developed. The tailored space planning model identifies the assignable square footage needed for each FTE (i.e., lower- and upper-division FTE) in three main areas of instructional space, instructional support space including library space, and student services. Additionally, parking assumptions are identified.

This tailored space model is compared to the types of space and standards currently used by both the community colleges and the baccalaureate institutions. The total space per FTE is also compared to lessons learned from the case studies of nearly a dozen consortium located throughout the nation.

1. Existing Space Planning Models

Space planning tools currently used by the state's higher education institutions include the Capital Analysis Model (CAM) developed by the community college system, and the Facilities Evaluation and Planning Guide (FEPG) developed by the four-year institutions. These tools result in square footage estimates for different types of space and for different types of students and instruction and result in "apples to oranges" types of comparisons.

The CAM model is a method of measuring the adequacy of the quantity of certain types of campus facilities at the community colleges. Its primary purpose is to evaluate the facility and capital improvement and budget requests of the colleges. This model is not considered appropriate for the consortium, since it estimates space needs in terms of daytime, peak campus FTE. Its appropriateness for use in estimating space for upper-division programs is also questionable. The CAM, when applied to a 2,500 FTE campus (including vocational education), and including all space types results in 54 ASF per FTE.

The FEPG includes standards for a full array of academic and research space and was developed primarily for use in developing new buildings on main campuses. Recently the standards have been used to determine space needs of the fresh-start branch campuses. The FEPG standards, adapted to fit the needs for branch campuses, have resulted in roughly 80 ASF per FTE.

2. *Tailored Model: Space Types*

The tailored space planning model identifies the assignable space needed per FTE for the categories shown in the following table, Tailored Space Planning Model. These categories and standards correspond to the goals and intent of the consortium to provide a complement of academic spaces similar to those found on main campuses of baccalaureate institutions:

- The classroom space standard reflects the goal to provide full day and evening instruction and utilization (i.e., full and day and evening use increases number of classroom hours available and thus reduces space needed per student when compared to FEPPG). Additionally, the classroom standard is adjusted not only for full day and evening use, but for technology as well. It is assumed that as much as 30% of instruction typically occurring within the classroom may be provided via technology at home, work or elsewhere; classroom space per student was reduced accordingly.
- Scheduled lab spaces are also reduced to account for full day and evening use. Additionally, existing community college labs may compensate for any shortage in the space standard, or difficulty in achieving full day and evening use.
- Open labs, or computer labs are estimated the same as for main campuses, recognizing the importance/prevalence of technology.
- The library space standard is very similar to main campus standards, reduced roughly 20% from FEPPG standards in anticipation of increased dependence on technology, and availability of resources from main campuses.
- Electronic student services will likely be offered, but the value of face-to-face services is acknowledged through the provision of space to accommodate a wide array of on-site student services, excepting childcare.
- Faculty program space is estimated in the same quantities as found on main campuses. Instructional media will likely be provided in a limited way, with the expectation that space allocated to instructional media on main campuses will supplement these activities.
- Facilities services (i.e., the physical plant) are estimated at the rate used most recently for the two UW branch campuses at Tacoma and Bothell.

Categories of space found included in the FEPPG but not the tailored space planning model include research labs, administration, and child care. The tailored space planning model identifies roughly 52 ASF per FTE for planning purposes. A .65 conversion factor for estimating gross building square footage is applied to the assignable square feet for each campus. This ASF to GSF conversion factor is within the range of assignable to gross building ratios found on recently designed and construction higher education projects.

Tailored Space Planning Model

BENCHMARK CATEGORIES	COLLEGE & UNIVERSITY CENTERS			
	FEPG*			
	ASF/FTE for a 4 Year Campus (selected categories)		Tailored Standard	
	No Distance Ed.	30% Distance Ed.	Goal/Intent	
Instructional Space				
Classrooms	14.0	9.3	6.5	** Achieve full day and full evening use.
Scheduled Labs	13.5	7.5	7.5	Achieve full day and full evening use.
Open Labs (computer labs)	4.5	4.5	4.5	Provide full complement to serve
Subtotal	32.0	21.2	18.5	upper division, placebound students.
Instructional Services and Student Support				
Library	12.8	10.3	10.3	Develop full library services.
Student Services	5.0	5.0	5.0	Take advantage of electronic access and
Instructional Media	2.0	2.0	2.0	acknowledge value of face to face
Subtotal	19.8	17.3	17.3	services.
Institutional Services				Recognize some prep occurs on main
Office and Related (conference, tutor)	14.0	14.0	14.0	campuses.
Facilities Services (physical plant)	3.3	2.8	2.8	No "hot seating"; provide for face to face
Subtotal	17.3	16.8	16.8	tutoring and conferencing.
Total ASF/FTE	69.1	55.3	52.5	

* Full FEPG yields approximately 85 ASF/FTE

** Reflects 30% reduction in classroom weekly student contact hours

3. *Impacts of Technology*

The exact role and impact that technology will have over the next 20 years on program delivery and space needs at each of the sites is uncertain.¹³ For planning purposes, an estimate or target/goal that 30% of instruction typically offered within classrooms, will be delivered via technology outside of the classroom is assumed. This estimate is translated into reduced classroom and instructional support space per student, as defined in the tailored space planning model. This approach is consistent with the idea that instruction delivery in the future will likely be a mix of modes, rather than purely classroom, ITV, web-based, etc., in order to be effective and meet the varying program needs of a diverse student population.

The facility improvements needed to meet the 30% instruction via technology goal are included in the unit costs. Initial review by representatives of WSU, leaders in the state regarding distance learning, resulted in the following recommended technology improvements for each College and University Center:

- At least one fully interactive electronic classroom to accommodate 40 students, technician-assisted, and with full T-1 transmission. A small control room is required and should operate more than one classroom at a time. Classroom should be constructed with consideration for the management of light and sound, as well as heating and air conditioning systems.
- A digital down-link to receive programs from the two K-20 up-links already in place and connected to classroom to accommodate 75 students. (Educational programs which currently utilize this technology tend to be short duration "workshop" offerings, but expect to see more academic classes delivered using this media in the future.) Special siting considerations include planning for "line of sight" and potential microwave interference.
- Teleconferencing capabilities to accommodate internet-based technology used for student counseling and small meetings. (While this technology may not be appropriate for delivery of academic programs to large numbers of students, it is helpful in providing advising at distance and conducting faculty meetings.
- Computer labs, with a minimum of 15 stations, are needed for those students who do not have a way to participate in computer on-line academic programs.
- Band width capacity of at least 5 full T-1's.

Subsequent planning will likely describe a system-wide technology master plan for the consortium. Assessments of existing technology infrastructure at each existing campus is described in Section VIII, Community College Expansion.

¹³ Efforts to justify the 30% technology target are largely speculative; an inexhaustive, though lengthy, list of trends and predictions about future technologies and access to technologies can be and has been compiled. However, no specific correlation between trends and the target/goal of percentage of instruction received via technology can reasonably be drawn.

4. *Comparison with Case Study Facilities*

A review of the consortia case studies suggest that the 52 ASF per FTE fits within a range of space offered at other, similar consortia. The first phases of several fresh start consortia are developed with 28 to 58 ASF per FTE. (Two consortia with much larger ASF per FTE may be considered outlying, having benefitted from significant amounts of surplus government buildings or land.) Consortia at the lower end of the range were primarily comprised of classrooms and computer labs. These consortia also shared classrooms, library or lab spaces at adjacent community colleges or high schools, utilized technology to a significant degree within their libraries and for delivery instruction, and offered limited amounts and types of administrative and faculty space in these early phases of development.

Most consortia representatives cautioned about the use of ASF per FTE comparisons for a couple of reasons. In several cases, the size of new facilities and enrollment to be served resulted from a pre-determined budget, and was not based on any known space standards or target enrollment. Also, most administrators used average credit hours as a unit of measure, rather than FTE, particularly given the part-time, non-traditional target student markets.¹⁴ Nonetheless, the case study findings suggest that the consortium tailored space planning model of 52 ASF per FTE is not atypical of early phases of development for higher education centers found throughout the country.

Finally, precedence for the use of a generalized space allowance is found in other states. Virginia adopted a 42.5 to 50 ASF per FTE standard for all "instruction and academic support space" in 1995.¹⁵ This space allowance does not identify space standards for specific space categories or types, but allows individual institutions to plan facilities to meet specific program needs. Virginia's Council for Higher Education requires institutions to provide documented justification for any additional space needs. Institutions are also encouraged to use technology, private-sector contracts and shared space with other public institution as a substitute for space.¹⁶

¹⁴ Please note that the rough estimates of ASF per FTE are based on simplified assumptions regarding ASF/GSF and average credit hours or headcount to FTE conversions.

¹⁵ This standard includes space used primarily for general academic instruction, vocational/technical instruction, special-session instruction, community education, preparatory/remedial instruction, educational media services, academic computing services, academic administration, academic personnel development, and course and curriculum development. It does not include library, ancillary support, and museum or gallery space.

¹⁶ Evaluation of Higher Education and Work Force Training Needs and Program Delivery Alternatives for the North Snohomish, Island and Skagit County Area of Washington State, MGT of America, Inc., September 1996.

D. “Normative Space Needs”

Simply, the tailored space planning model is applied to the forecast enrollments by site for each of the timeframes. These are described as “normative” since subsequent “tests of fit” are needed to describe actual new building and parking facilities required at each site based on existing campus conditions, especially as relates to the need for surface or structured parking.

The tailored space planning model is applied to additional enrollment on each campus only. Existing deficiencies at community colleges campuses and centers is not addressed in this analysis. Early tests of the CAM, FEPG and tailored space planning models showed significant shortages at existing campuses, such that the cost of correcting these shortages was not only outside of the scope of this analysis, but considered an insurmountable hurdle for the NSIS project. Next steps in the NSIS project planning would logically include detailed master plans for each of the community colleges that may identify total enrollment space needs and address existing space deficiencies and inefficiencies.

"Normative Space Needs" for Community College Campuses and Centers

	COMMUNITY COLLEGE MAIN CAMPUSES									CC CENTERS		
	EDMONDS CC			EVERETT CC			SKAGIT VALLEY C					
	2005	2012	2020	2005	2012	2020	2005	2012	2020	2005	2012	2020
LOWER DIVISION FTE												
Additional FTE	135	101	50	982	664	386	514	373	229	327	232	141
Running Start	67	36	36	73	39	39	110	59	59	29	16	16
Add'l Lower Division FTE	202	137	86	1,055	703	425	624	432	288	356	248	157
UPPER DIVISION FTE	430	.	.	237	.	.	195	.	.	137	.	.
TOTAL ADDITIONAL FTE	632	137	86	1,292	703	425	819	432	288	493	248	157
ADDITIONAL SPACE NEEDS												
Benchmark Space Categories	ASF/FTE											
Instructional Spaces	18.5	11,692	2,535	1,591	23,902	13,006	15,152	7,992	5,328	9,121	4,588	2,905
Instruction Services and Student Support	17.3	10,934	2,370	1,488	22,352	12,162	14,169	7,474	4,982	8,529	4,290	2,716
Institutional Services	16.8	10,618	2,302	1,445	21,706	11,810	13,759	7,258	4,838	8,282	4,166	2,638
Additional ASF (rounded, -2)	52.6	33,200	7,200	4,500	68,000	37,000	43,100	22,700	15,100	25,900	13,000	8,300
Add'l GSF (rounded, -3)	0.65	51,000	11,000	7,000	105,000	57,000	66,000	35,000	23,000	40,000	20,000	13,000
			69,000			196,000			124,000			73,000
ADDITIONAL PARKING NEEDS*												
FTE Conversion to Headcount												
Lower Division	0.487	277	207	103	2,016	1,363	1,055	766	470	671	476	290
Upper Division	0.67	642	.	.	354	.	291	.	.	204	.	.
Add'l Student Headcount		919	207	103	2,370	1,363	1,346	766	470	876	476	290
Student Parking												
Student Concentration	0.5	459	104	51	1,185	682	673	383	235	438	238	145
Student Commuter - Year 2005	0.8	368			948		539			350		
Student Commuter - Year 2012	0.6		62		409			230			143	
Student Commuter - Year 2020	0.4			21					94			58
Faculty & Staff Parking												
Students per Faculty	18	35	8	5	72	39	46	24	16	27	14	9
Faculty Concentration	0.5	18	4	2	36	20	23	12	8	14	7	4
Staff per Faculty	0.75	26	6	4	54	29	34	18	12	21	10	7
Staff Concentration	0.9	24	5	3	48	26	31	16	11	18	9	6
Add'l Parking stalls		409	71	26	1,032	455	592	258	113	383	159	68
				506			1,674		963			610

* Excluding Running Start

"Normative Space Needs" for the New Center and System Totals

	NEW CENTER		NOT ALLOCATED		TOTALS		CUMULATIVE TOTALS	
	2005		2012	2020	2005	2012	2005	2012
LOWER DIVISION FTE								
Additional FTE					1,958	1,370	1,958	3,328
Running Start					279	150	279	429
Add'l Lower Division FTE					2,237	1,520	2,237	3,757
						956		4,713
UPPER DIVISION FTE	450		1,829	993	1,504	1,884	1,504	3,388
						1,048		4,436
TOTAL ADDITIONAL FTE	450		1,829	993	3,741	3,404	3,741	7,145
						2,004		9,149
ADDITIONAL SPACE NEEDS		ASF/FTE						
Benchmark Space Categories								
Instructional Spaces	8,325	18.5	33,837	18,371	69,209	62,974	69,209	132,183
Instruction Services	7,785	17.3	31,642	17,179	64,719	58,889	64,719	123,609
and Student Support								158,278
Institutional Services	7,560	16.8	30,727	16,682	62,849	57,187	62,849	120,036
Additional ASF (rounded, -2)	23,700	52.6	96,200	52,200	196,800	179,100	196,800	375,800
Add'l GSF (rounded, -3)	36,000	0.65	148,000	80,000	303,000	276,000	303,000	578,000
						33,667		153,703
						105,400		481,200
						162,000		740,000
ADDITIONAL PARKING NEEDS*								
FTE Conversion to Headcount								
Lower Division		0.487						
Upper Division	672	0.67	2,730	1,482				
Add'l Student Headcount	672		2,730	1,482				
Student Parking								
Student Concentration	336	0.5	1,365	741				
Student Commuter - Year 2005	269	0.8						
Student Commuter - Year 2012		0.6	819					
Student Commuter - Year 2020		0.4		296				
Faculty & Staff Parking								
Students per Faculty	25	18	102	55				
Faculty Concentration	13	0.5	51	28				
Staff per Faculty	19	0.75	76	41				
Staff Concentration	17	0.9	69	37				
Add'l Parking	298	stalls	938	361	2,714	1,882	2,714	4,595
						755		5,350

* Excluding Running Start

E. Parking Assumptions

The parking needs of the enrollments at each site are calculated based on a number of assumptions.

- **FTE to Headcount Conversion:** Academic building space standards are based on FTE, but parking needs are based on headcount. The conversion of FTE to headcount is based on the same factors used in the NSIS I needs assessment for lower-division and upper-division enrollments.¹⁷ Lower-division FTE/headcount factor is .487, meaning that roughly two students comprise one FTE. Upper division FTE/headcount conversion factor is .67. The community college conversion factor is based on the 1996 statewide average of .487 state-funded FTE per total headcount, while the upper-division conversion factor represents the experience of the UW Tacoma and Bothell campuses for older, part-time students. Parking for running start students is not included in this analysis.

Headcount for faculty and staff is estimated at 1 faculty for 18 FTE and .75 staff per faculty.

- **Concentration Factor:** It is assumed that as many as 50% of the students, 50% of the faculty and up to 90% of the staff may be on campus at any one time.
- **Mode Split:** The percentage of those students present at any one time who will drive and require a parking space (versus ride a bus, carpool, bike or walk) is assumed to be 80% in Year 2005, 60% in Year 2012 and 40% in Year 2020. These aggressive mode splits are based on recent branch campus experience and have been much debated. The transit goals are supported by environmentalists and community members, although questioned by campus administrators seeking to meet the needs of older working students. Further, these goals may require significant roadway, bikeway, and transit service improvements. Finally, these goals may be adjusted in subsequent phases of the project, based on location specific transportation studies, as part of State Environmental Policy Act requirements and policies (SEPA).

The stalls needed to serve the enrollments are estimated by converting the FTE to headcount, applying a concentration factor to identify the maximum number of persons on campus at any one time, and applying a mode split target to identify the number of stalls needed at any one time.

¹⁷ Please note that a standardized conversion factor is appropriate for this level of planning, but that FTE to headcount ratios vary by campus; future studies will likely reflect trends/needs of individual sites.

VIII. COMMUNITY COLLEGE DEVELOPMENT PLANS

At first glance, the existing community college campuses would appear to be fully developed, offering little vacant area for new facilities or parking without impacting existing structures or displacing parking. This presumption proves true through a capacity and “test of fit” analysis that identifies potential locations for the “normative” space and parking needed to serve the forecast enrollments on the existing campuses. However, the resultant building and parking improvements not only serve the added enrollments, but also compensate for development impacts to the existing campuses (e.g. displacement of existing structures or parking). The following process was used to identify Community College development plans:

- Understand the existing campus facilities through site visits, discussions with campus facilities managers and local municipal offices, and reviews of existing campus master plans and facility assessments.
- Analyze campus potentials and constraints including the overall organizing principles of the campus, such as access and circulation, open spaces and campus edges; identify potential future building and parking sites.
- “Test the fit” of the normative space and parking needs of the forecast enrollments on the campus; identify any parking displaced by new facilities, as well as the mix of surface and structured parking stalls.

Development Plans created for each community college campus estimate the amount of additional building gross square footage, and the mix of surface and structured parking needed in the Years 2005, 2012 and 2020. The preliminary capital cost estimates are based on these development plans.

Simplifying assumptions about the ability of the community college centers, including Oak Harbor, Clinton, and the Applied Technology and Training Center (ATTC) to accommodate forecast enrollments are also described in this section. Subsequent phases of project planning will likely address these centers in more detail.

The Development Plans represent a starting point, used to test the capacity and expansion potential of the existing community colleges and should not be construed as potential design solutions for campus expansion. Rather, subsequent phases of consortium planning should identify alternative facility development strategies and test the assumptions used in this planning effort as regards expansion of property boundaries, redevelopment of existing facilities, and leased facility options.

A. Campus Development Assumptions

Several assumptions guide the development plans for the community college campuses.

1. Existing Site Boundaries

Existing campus boundaries were used for this level of planning, with one exception. Expansion of the Everett Community College is addressed/included, based on the direction of the EvCC’s current Master Plan that identifies the addition of an adjacent 5.9 acre parcel.

2. *Building Demolition and Replacement*

Candidate facilities for replacement include only portable buildings and surface parking. Building replacement due to age, condition or efficiency has not been considered within this planning effort. Subsequent master planning and pre-design at each of the campuses would logically evaluate trade-offs between build new versus remodel, renovation or replacement alternatives.

3. *Building Size and Placement*

Building siting considers overall campus form, preserves existing open space, and extends major circulation corridors. Parking is located at the edges of campus; parking structures are located adjacent to major arterials, both in order to reduce potential negative impacts to the campus and allow future campus expansion.

Building heights may vary by campus based on existing campus structures and fit with community. New buildings are assumed not to exceed the tallest existing buildings by more than two floors. New building footprints follow the size and scale of existing campus buildings, with a maximum of 60,000 gross square feet in any one building, and are typically shown with 15,000 to 20,000 square foot footprints.

B. *Edmonds Community College (EdCC)*

1. *Potentials and Constraints*

The existing campus comprises roughly 425,000 gross square feet in 13 buildings on approximately 45 acres. Additionally, the campus leases some 77,000 gross square feet in buildings near the campus. The campus benefits from a compact and efficient layout, mature vegetation and covered walkways and skybridges between the 2 and 3 story buildings. Recent additions to the campus include the transit facility located at the front entry and the new Snohomish Hall that houses classrooms, computer and class labs, and administration offices. The existing surface parking is evenly distributed around the perimeter of the campus.

EdCC is undertaking a master plan for the campus that is anticipated to be completed by the end of 1998. Current building projects include a plan to replace some 8 modular buildings located along the west edge of the campus and the golf course, with a 60,000 gross square foot facility to be jointly developed and occupied with Central Washington University.¹⁸ (The modular buildings comprise roughly 22,000 gross square feet and date back to 1969.)

Other, potential new building areas include the redevelopment of a surface parking lot near the north end of the campus, located to the west of the central plant and next to Woodway Hall. Benefits of this site for a new facility include visibility from 68th Avenue West and pedestrian connections to existing buildings on both first and second floor levels. This building site may also connect efficiently to the central plant, should capacity be available.

¹⁸ CWU currently leases space in the near-by Sno-King Building, and is beginning a pre-design study for the joint-use facility to be built on the EdCC campus.

Parking is a major constraint on this campus; there is no idle land available for additional parking and existing surface parking appears to be efficiently laid out. Potential new parking sites include the soccer field at the north end of the campus or a move to structured parking.

Opportunities to expand immediately adjacent to the campus, without crossing roads, may be limited since the campus is bounded by the golf course, the Education Center, and 68th Avenue West. The best adjacent expansion may best be explored to the north end of the campus.

2. *Years 2005 and 2020 Development Plans*

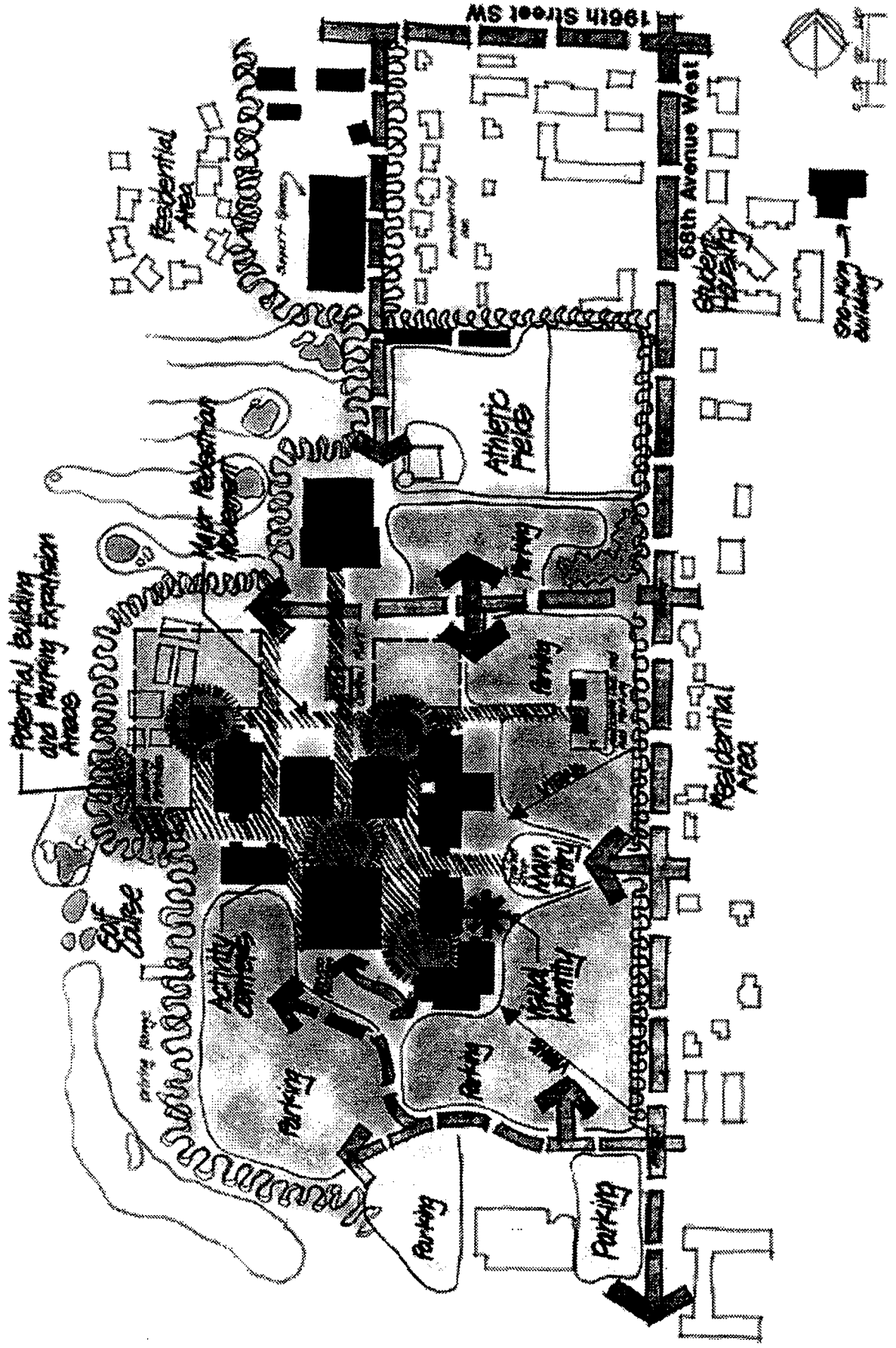
The tailored space planning model identifies a need for over 51,000 gross square feet and just over 400 parking stalls on the EdCC campus to house the forecast consortium enrollments in the Year 2005, growing to 69,000 gross square feet and a total of just over 500 additional stalls by the Year 2020.¹⁹

The Year 2005 Development Plan shows a potential footprint for the 51,000 gross square feet of academic space. Nearly 600 stalls are needed in the Year 2005 to account for the displaced parking from the new building and parking facilities. Two hundred stalls can be created by redeveloping the existing soccer field. A parking structure is required to provide the remaining 400 stalls and stay within the college's existing campus limits.

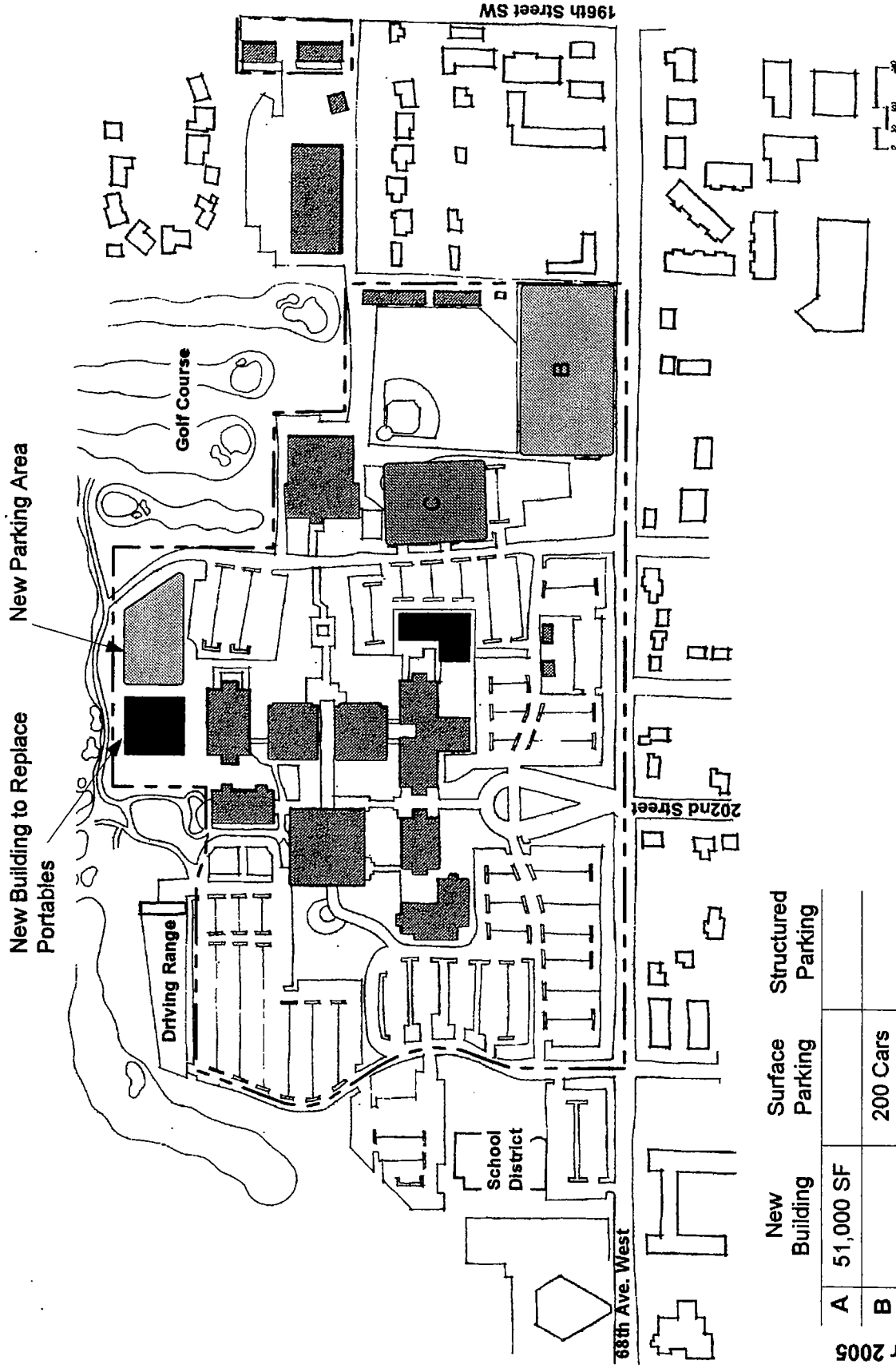
The Year 2020 Development Plan shows 18,000 additional gross square feet built near the proposed location of the new joint-use EdCC and CWU facility. The parking structure would need to be expanded by 250 stalls to meet the needs of the additional enrollment as well as the displacement of parking.

As with other campuses, alternatives to structured parking will likely be explored in subsequent planning phases. These alternatives may include expansion of campus boundaries, satellite sites for building or parking, transit improvement plans or shuttle services, or parking fees. Analysis of these alternatives would necessarily explore time-phased capital and operating costs.

¹⁹ Please note that for the EdCC campus, the additional space needs are estimated for consortium related student growth only, and do not include space needed for EdCC growth outside of the study area.

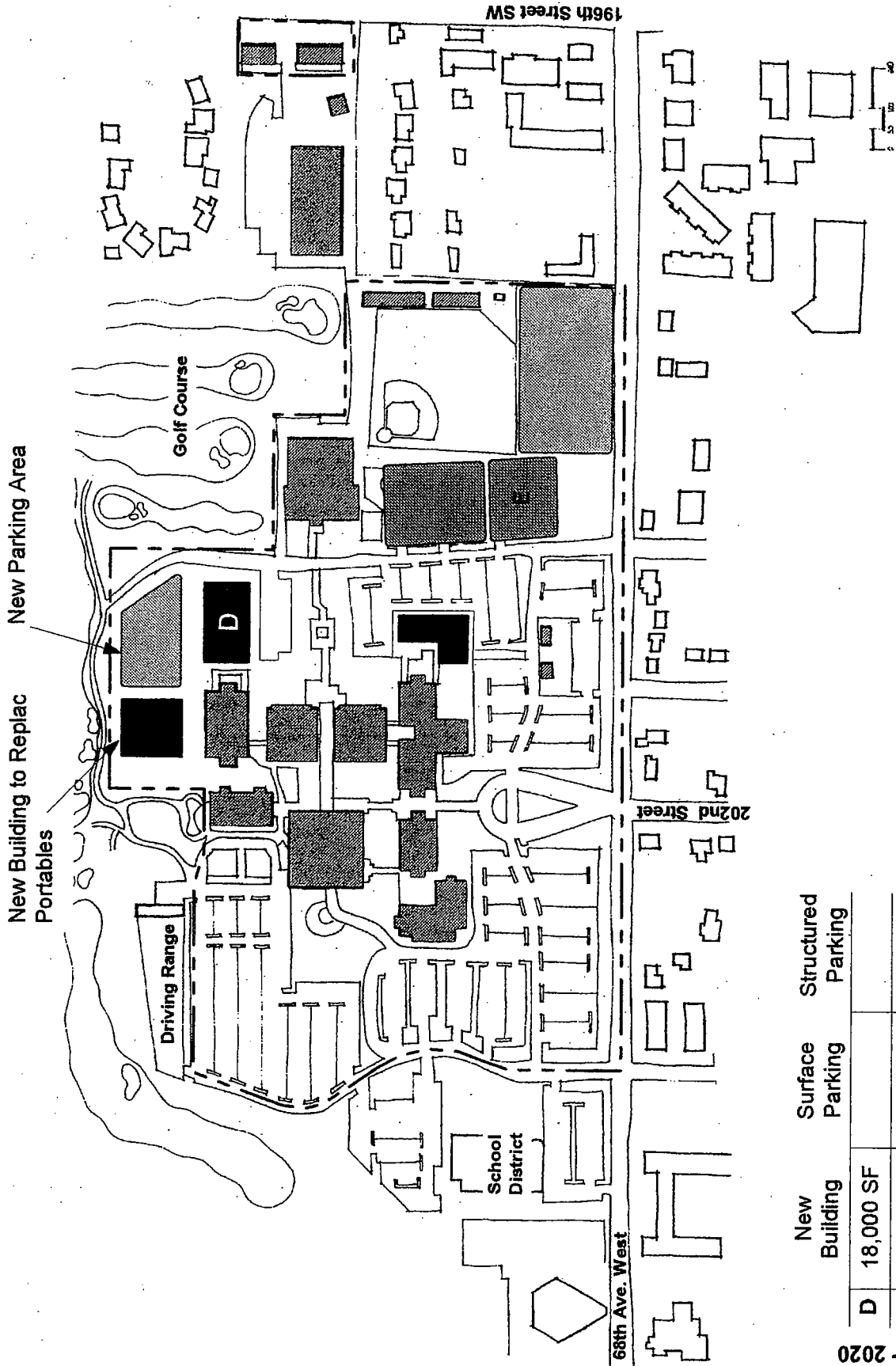


Edmonds Community College Campus Potentials and Constraints



Year 2005		New Building		
		Surface Parking		Structured Parking
A	51,000 SF			
B		200 Cars		
C				380 Cars
TOTAL	51,000 SF	200 Cars		380 Cars

Edmonds Community College Development Plan: Year 2005



Year 2020	New Building		
	Surface Parking	Structured Parking	
D	18,000 SF		
E		250 Cars	
TOTAL	18,000 SF	250 Cars	

Edmonds Community College Development Plan: Year 2020

C. Everett Community College (EvCC)

1. *Potentials and Constraints*

The EvCC campus currently comprises roughly 415,000 gross square feet of space in 18 buildings on approximately 30 acres. The building inventory includes several facilities, including the gym, located one to two blocks to the south of the main campus. The age and condition of the facilities ranges widely, with the earliest administration buildings constructed in 1938 and the most recent Early Learning Center built in 1990. Most buildings, however, were built in the 1950s. The campus follows a linear pattern of development, with irregular quads and common areas offering few clues to finding ones way around the campus. Older, single story campus buildings also consume valuable campus land area and would logically be candidates for redevelopment.

Like Edmonds Community College, EvCC has a master plan underway, in which the college identifies a number of goals and strategies to improve student access to programs, improve the functionality and appearance of facilities, plan for technology, and accommodate future growth.

The College has expanded its campus in north Everett through the acquisition of 5.5 acres of former residential property. Given the compaction in north Everett and the multiple site uses present there, Everett Community College experienced a number of difficulties in arranging the expansion and associated construction of the Instructional Technology Center. As a result of numerous public and neighborhood meetings, a project plan was developed that met the educational needs of the college and mitigated the impact it had on the surrounding community.

The Instructional Technology Center is presently under construction and includes a 39,000 square foot building, parking facilities to accommodate 247 vehicles, new campus entrance, and road improvements. The ITC will provide 25,000 square feet of assignable space for natural sciences and basic skills labs; engineering science, music, and faculty offices. Two electronic classrooms will be features of the building. The center and campus improvements will be completed in January 1999.

Opportunities for additional campus expansion are limited, with the campus bounded to the north by a golf course, to the south by Whittier Elementary School and single family neighborhoods on the west. Campus expansion would likely progress to the east, following the direction of the Instruction Technology Building.²⁰ Development on the 6 acre parcel between the campus and Highway may offer the College visibility and access from Highway 99; a new “front door.” As a major/regional arterial, Highway 99 may be a candidate for transportation improvements, including a transit hub (studies to site that facility have not been conducted, but it is the college’s understanding that the facility would be adjacent to the college).

Challenges in developing this site may include the distance from Highway 99 to the center of campus, including student services and library. Also, height limits on the campus pose a constraint to future development. When approving the current capital project, the City imposed a height restriction of 35 vertical feet for any structures within 75 feet of the campus perimeter. Structures further than 75 feet from the perimeter can be no higher than 50 feet. The current height restriction in the buildout zone is also 35 feet.

²⁰ While in the process of amending the comprehensive plan of the City of Everett to allow the expansion project, the College’s intent to direct additional future expansion east to Highway 99 was written into the final text of the revised comprehensive plan. The NSIS proposal to extend the college’s buildout to Highway 99 is consistent with the City’s current comprehensive Plan.

2. *Years 2005 and 2020 Development Plans*

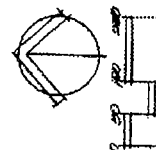
The tailored space planning model identifies a need for over 105,000 gross square feet and just over 1,032 parking stalls on the EvCC campus to house the forecast consortium enrollments in the Year 2005, growing to nearly 200,00 gross square feet and a total of nearly 1,674 additional stalls by the Year 2020.

The Year 2005 Development Plan shows a potential footprint for two 52,000 gross square foot facilities and 1,032 parking stalls on the adjacent 6 acre parcel. A parking structure is needed to house roughly two thirds of those stalls.

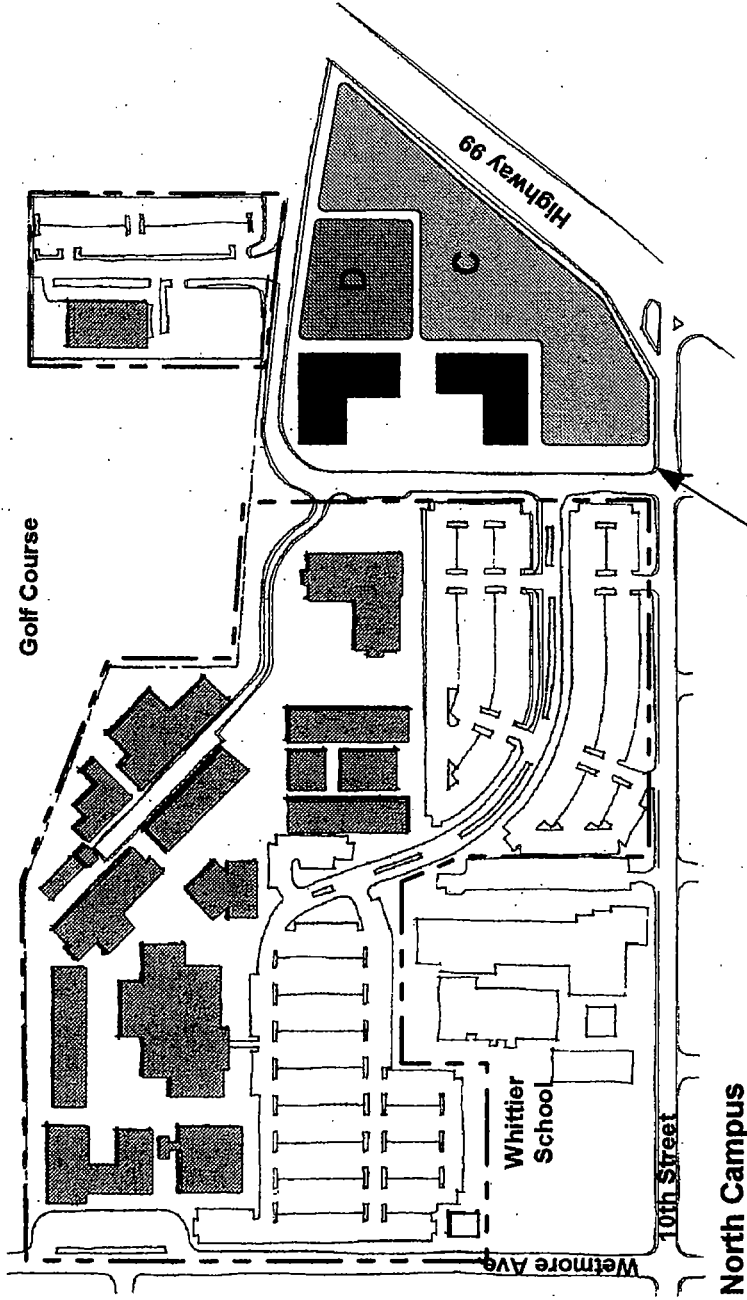
The Year 2020 Development Plan shows 91,000 additional gross square feet built within the existing campus, in two facilities.²¹ The additional 1,000 parking stalls may be created by expanding the capacity of the parking structure on the 6-acre site along Highway 99. Parking structures are estimated at 4 to 5 parking levels. Alternatively, redeveloping surface parking lots near the center of the campus may better distribute the parking, if acceptable to neighboring uses and consistent with height limits.

Again, alternatives to structured parking will likely be explored in subsequent planning phases. These alternatives may include satellite sites for building or parking, transit improvement plans or shuttle services, or parking fees, and would include time-phased operating as well as capital costs.

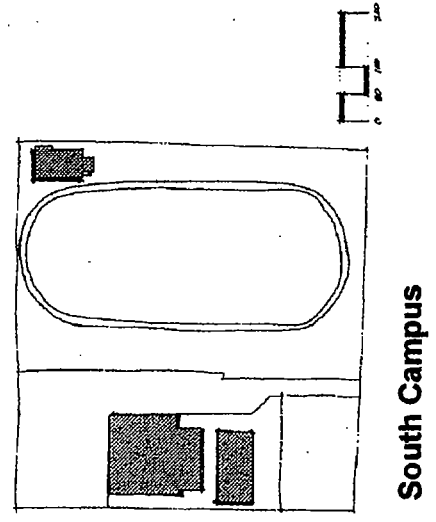
²¹ Careful consideration of replacing older, inefficient facilities in lieu of new development should be made.



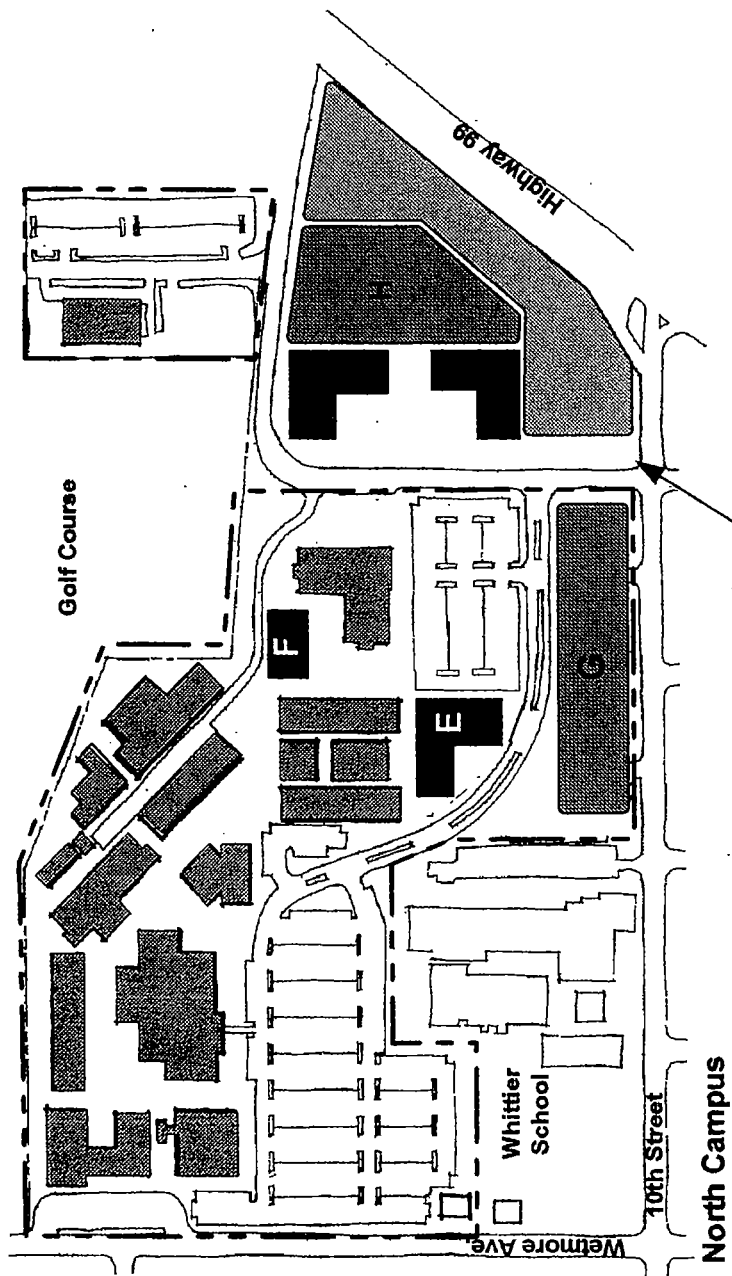
Everett Community College Campus Potentials and Constraints



	New Building	Surface Parking	Structured Parking
Year 2005			
A	52,500 SF		
B	52,500 SF		
C		380 Cars	
D			652 Cars
TOTAL	105,000 SF	380 Cars	



Everett Community College Development Plan: Year 2005



	New Building	Surface Parking	Structured Parking
E	64,800 SF		
F	26,200 SF		
G			444 Cars
H			547 Cars
Year 2020			
TOTAL	91,000 SF		991Cars

Everett Community College Development Plan: Year 2020

D. Skagit Valley College (SVC)

1. Potentials and Constraints

The largest of the three main campuses, the SVC owns approximately 95 acres, having recently expanded its campus boundaries to the east, fronting on College Way. Campus facilities comprise nearly 300,000 gross square feet of space in over 30 facilities. The older campus buildings were constructed in the 1950s and form a traditional “quad,” albeit of one story, exterior corridor buildings. A Comprehensive Development Plan adopted in 1968 led to major building projects located in what is now the heart of the campus, although not following the strong, traditional quad direction set in the 1950s. More recently, a number of modular/portable buildings and former single family homes have been occupied by the campus, primarily for support type of functions, and located along the west edge of the campus.

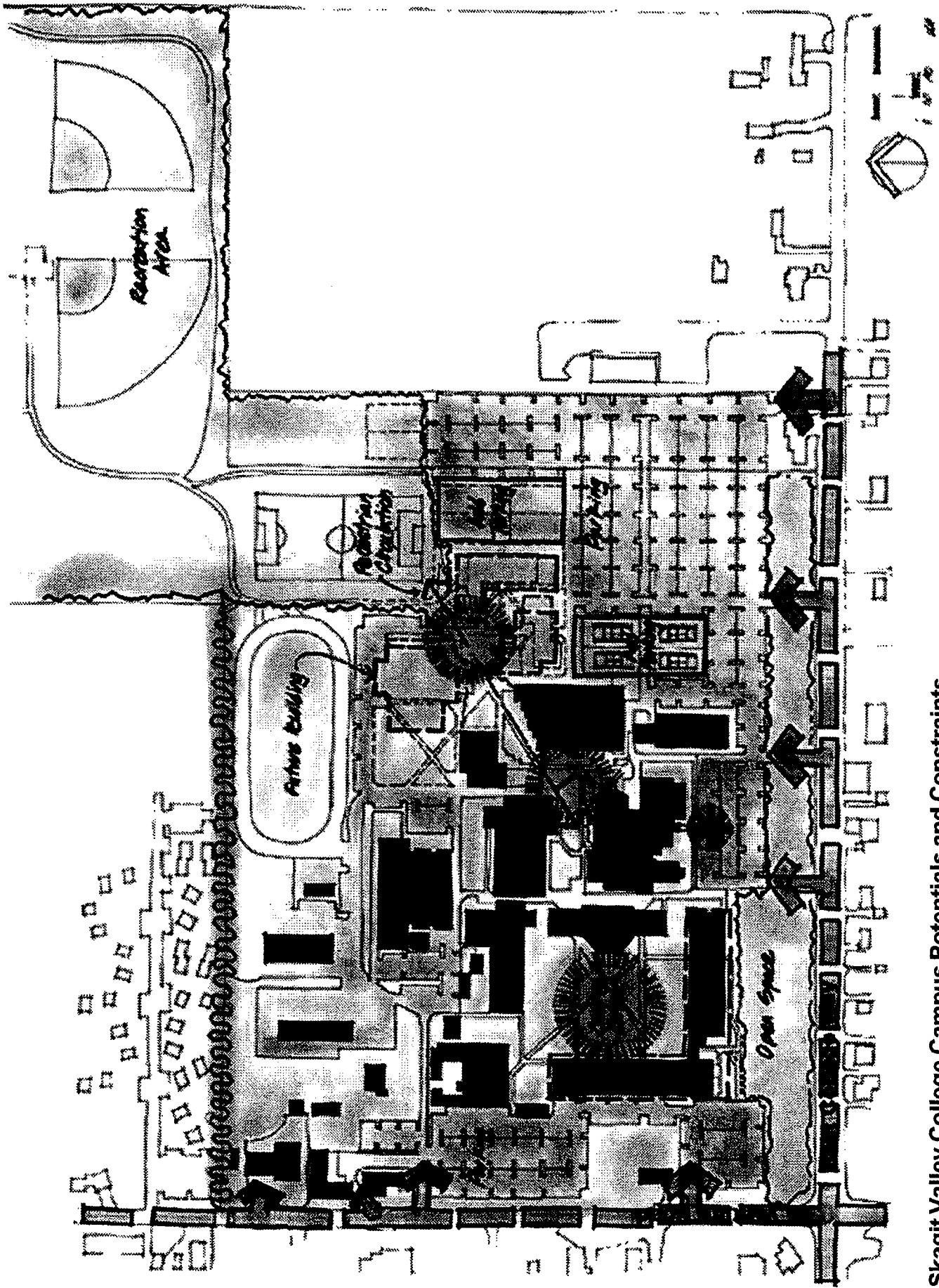
SVC has recently developed an updated Master Plan (1993), which offers a comprehensive study of existing and future campus conditions, and re-asserts the importance of careful building placement, overall campus design unity, and the “quad” concept. The Master Plan suggests new buildings to be developed at the northeast corner of the campus, creating new “quads,” and strong visual and pedestrian connections between campus buildings and open spaces. Future parking lots are directed towards the south and east edges of the campus.

2. Years 2005 and 2020 Development Plans

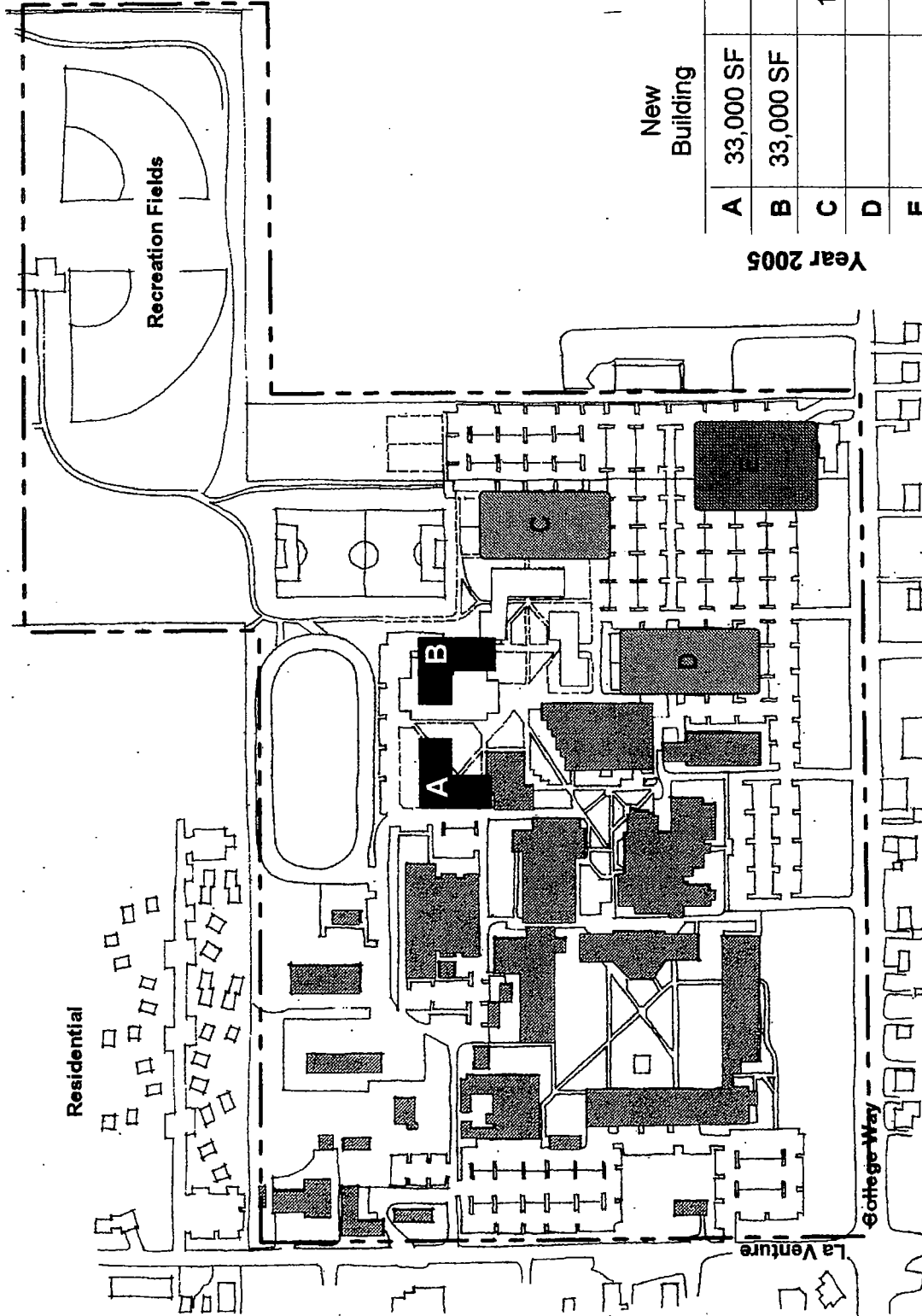
The tailored space planning model identifies a need for 66,000 gross square feet and just over 360 parking stalls on the SVC campus to house the forecast consortium enrollments in the Year 2005, growing to nearly 124,000 gross square feet and a total of nearly 600 additional stalls by the Year 2020.

The Development Plans are based largely on the 1993 Master Plan. The Year 2005 Development Plan shows footprints for two 33,000 gross square foot facilities at the northeast edge of campus. Redevelopment of the older tennis courts, as well as vacant areas, provide nearly 200 parking stalls. A parking structure of nearly 520 stalls is needed to replace existing surface lots.

The Year 2020 Development Plan shows 58,000 additional gross square feet built on the east edge of the campus, again in two facilities, similar to the Master Plan. An additional building of roughly 15,000 square feet is needed to replace space lost by redeveloping nearly 300 parking stalls on the northwest edge of the campus. (This building square footage may be accommodated within other campus projects, based on functional space plans.) Finally, the parking structure is expanded to accommodate an additional 170 stalls. An alternative to expanding the parking structure may be additional redevelopment along the western edge of the campus. The sequencing of the improvements, delaying costly structured parking, may be explored in subsequent planning efforts that explore time phased, operating and capital costs.

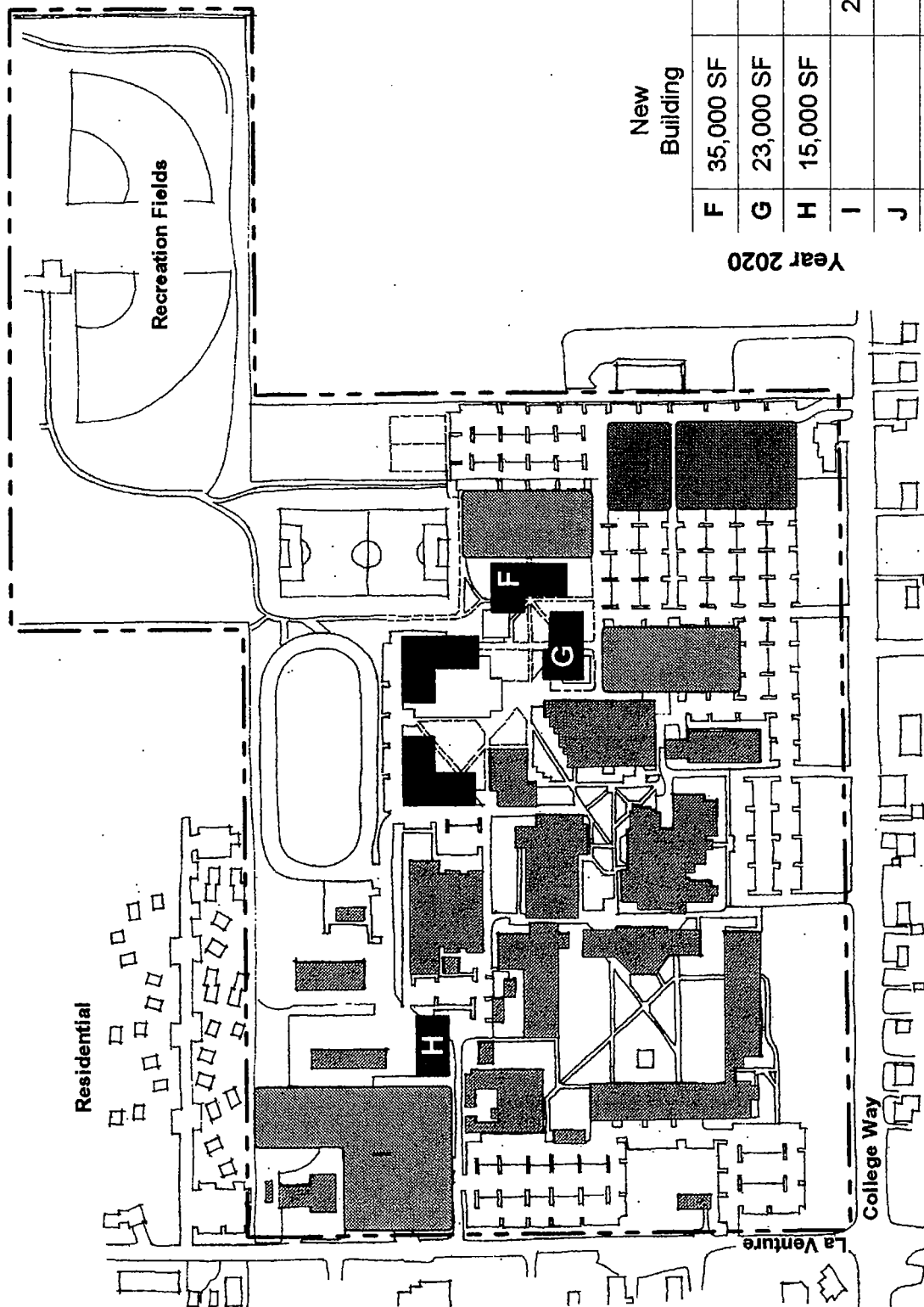


Skagit Valley College Campus Potentials and Constraints



Year 2005		New Building	Surface Parking	Structured Parking
A	33,000 SF			
B	33,000 SF			
C			100 Cars	
D			92 Cars	
E				520 Cars
TOTAL		66,000 SF	192 Cars	520 Cars

Skagit Valley College Development Plan: Year 2005



Year 2020

	New Building	Surface Parking	Structured Parking
F	35,000 SF		
G	23,000 SF		
H	15,000 SF		
I		278 Cars	
J			173 Cars
TOTAL	73,000 SF	278 Cars	173 Cars

Skagit Valley College Development Plan: Year 2020

E. Community College Centers (Oak Harbor, Clinton, ATTC, Paine Field)

The distribution of the forecast enrollments included FTEs at several of the larger community college centers. In total, the estimated space needed for the four centers listed above is 40,000 gross square feet in Year 2005, growing to 73,000 gross square feet by Year 2020. Space needs were not “tested for fit,” although based on site tours of the campuses, parking may be a constraint at both Oak Harbor and ATTC. However, for planning purposes it is assumed that building and parking space will be provided. Subsequent studies may explore alternatives to constructing small increments of new facilities, or expanding site boundaries for parking at these centers, such as leasing space or providing increased technology capacity and access.

IX. LOCALE SELECTION FOR ADDITIONAL CENTER

A comprehensive assessment and evaluation was undertaken to select the most appropriate location for the additional stand-alone center. The locale selection process involved:

- Identifying general areas within the North Snohomish, Skagit and Island County service area where the proposed facility could be located.
- Identifying criteria for the most important locational attributes for the CUC and the weighting of the criteria.
- Applying the criteria to each identified locale, evaluating the results and selecting a locale(s) that best meet the criteria.

The evaluation was not intended to select a site for the proposed facility, but rather to set the boundaries for the most appropriate general location for the CUC. Selecting a preferred locale, rather than a site, is intended to avoid speculation regarding a specific site or inflate the value of candidate sites and facilities prior to state purchase or lease. The subsequent pre-design phase of the consortium effort will identify, evaluate and compare alternative sites and forms of development for the proposed new facility.

A. Identified Locales

Six general areas or locales were identified within the North Snohomish, Skagit and Island County service boundary for accommodating the proposed CUC. These locales, which are displayed in the following graphic (Candidate Locales), are Everett-South, Everett-North, Marysville, Arlington, Stanwood, and Mount Vernon. The boundaries of each locale corresponded to the boundaries of the urban growth area for each respective jurisdiction.²² Because of its large size, the Everett area was broken down into two locales, with North 41st Street south of downtown Everett as the dividing point between the south and north locale.

B. Evaluation Criteria

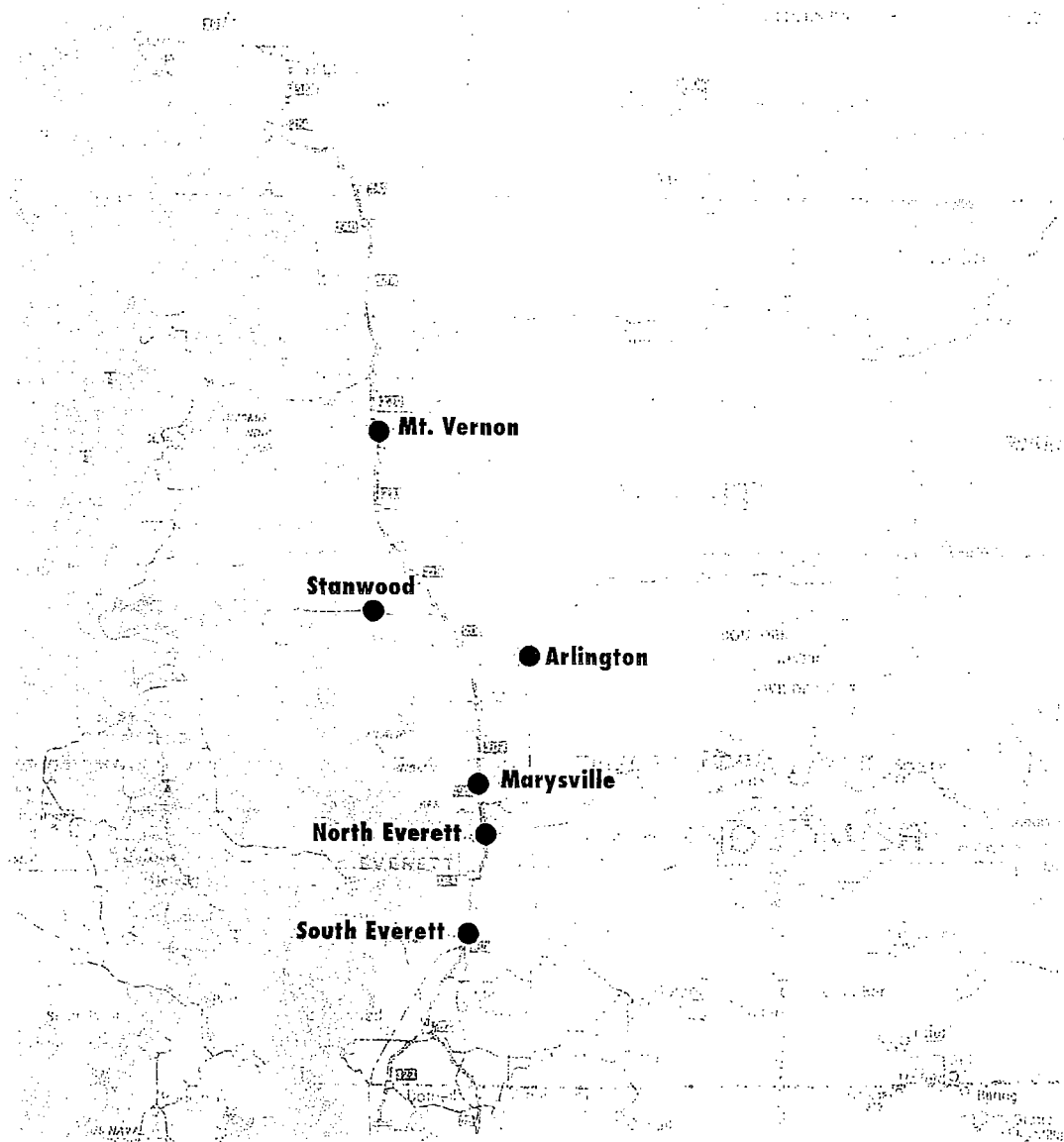
Both the Project Coordinating Team (PCT) and the Project Advisory Group (PAG) played a major role in identifying and weighting the criteria used in the locale selection process. The following paragraphs describe the six final criteria agreed upon by the study participants.

1. Percentage of Service Area Residents and Employees at Years 2000 and 2010 who Live or Work within a 30-minute Travel Distance (one-way trip during peak hour) from the Locale

Based on the experience of other community colleges and universities in Washington State, the percentage of residents and employees who live/work within a 30-minute trip one-way during the peak commuting hours was determined to be an appropriate basis for assessing student access to the CUC for each locale. Since the proposed CUC is expected to serve both home- and work-based students, access to both place of employment and place of residence was considered in this criterion. This 30-minute travel distance criterion is also supported by findings of the Target Market and Boeing Employer surveys conducted within the study area by the UW, wherein students identified a preferred 20 minute commute.

²² Please note that these boundaries apply to those areas under jurisdiction of the GMA and do not apply to lands owned by Indian nations.

Candidate Locomes for New College and University Center



2. Average Travel Miles per Trip per Person Served within a 30-minute Travel Distance

While Criterion 1 measures access by estimating the total number of persons and employees served within a 30-minute travel distance from each locale, Criterion 2 assesses the “efficiency” of each locale in serving surrounding residents and employees, through the average miles per trip per person measure. A lower average miles per trip for a given locale indicates that more people live/work in a closer proximity within the 30-minute boundary than other locales. For example, if Locale 1 and Locale 2 each serve 100,000 residents within 30-minutes travel distance, but 75% of Locale 1’s population reside within 15 minutes travel distance as compared to 25% of Locale 2’s population, Locale 1 would have a lower average travel miles per trip, as follows:

Locale 1:	100,000 x 75%= 75,000 x 15 miles =	1,125,000 miles
	100,000 x 25% = 25,000 x 30 miles =	<u>750,000 miles</u>
	Total Miles	1,875,000
	Divided by 100,000 population	18.75 miles per person
Locale 2:	100,000 x 25%= 25,000 x 15 miles =	375,000 miles
	100,000 x 75% = 75,000 x 30 miles =	<u>2,250,000 miles</u>
	Total Miles	2,625,000
	Divided by 100,000 pop	26.25 miles per person

In this case, Locale 1 is more “efficient” in serving the surrounding population due to the higher density of population living within 15 minutes as compared to Locale 2.

Efficiency also relates to the use of public and natural resources, such as roadway infrastructure and fuel.

3. Adequate Range of Environmentally Unconstrained Land with Appropriate Land Use Designations

The objective of this criterion is to assess, on a threshold basis, whether there is a sufficient amount of developable land in which to locate the CUC in each locale. Since the analysis is intended to evaluate general areas or locales and not specific sites, this criterion looks at the overall land capacity within a given locale rather than numbers of specific sites.

4. Availability and Capacity of Public Utilities and Services by Year 2005

This criterion takes Criterion 4 one step further and assesses whether each locale will have sufficient developable land, including the necessary public infrastructure—utilities, roads, and services—by Year 2005, the projected year that the CUC will initially open its doors to students.

5. *Proximity to Existing or Proposed Mass Transit Services by Year 2005*

The purpose of this criterion is to evaluate the availability and frequency of existing and proposed mass transit service within each locale. The focus is on assessing how well the overall transit system will meet the needs of commuting students in each locale. In measuring the degree to which each locale responds to this criterion, recognition is given to the fact that a new educational institution, wherever it is located, is likely to result in routing and scheduling changes to facilitate transit use.

6. *Opportunities for Connectivity and Technology Readiness by Year 2005*

There is an expectation that the CUC will provide a significant portion of educational services through distance learning methods such as cable TV and the internet. This criterion assesses the availability of existing and proposed technology infrastructure within each locale to meet the distance learning needs of the campus. The criterion is concerned with both the availability of needed technology infrastructure, such as fiber optic paths and adequate internet providers, and the presence of any barriers to connectivity such as existing transmission towers or geographical features.

C. Weighting of Evaluation Criteria

Both the Project Coordinating Team and the Project Advisory Group were given the opportunity to prioritize the criteria in terms of its relative importance. Both the PCT and PAG collectively considered proximity to population and employment as the most important criteria, followed by opportunities and barriers to for connectivity/technology. The other criteria were given relatively lower weights. Based on the priorities established by both groups, the following weights were assigned for each criterion (total allocation of 100 weighting points):

1. Percentage of service area population/employment within 30 minutes	30
2. Average travel time per person served within 30 minutes	30
3. Adequate range of environmentally unconstrained land	5
4. Availability and capacity of public utilities and services	5
5. Proximity to existing and proposed transit service	10
6. Opportunities /barriers for connectivity/technology	20

D. Measuring and Assessing Criteria for Each Locale

For each locale, values were determined for each criterion and weights applied to generate a weighted value. The total weighted score for each locale was then calculated so that comparisons between locales could be made on a consistent basis. The methodology for completing the locale analysis is shown in the Methodology for Locale Evaluation table. The locale and associated values in this table are purely hypothetical, intended to demonstrate the manner in which weighted values have been calculated. The actual results of the locale analysis are displayed and discussed in Section IX.E.

As shown in the table, quantifiable measures have been calculated for Criteria 1 and 2 to reflect estimates of service area population and employment within 30 minute travel distances and related miles per trip per person. These values have then been standardized on a scale of 0-5 before applying the appropriate weighting factor. Since Criteria 3 through 6 do not lend themselves to quantification, qualitative values have been assigned on a 0-5 scale, with higher values reflecting a better score. It should be noted that these latter criteria are typically site specific, rather than locale specific criteria, but were included in this analysis in order to identify any “fatal flaws” with any of the locales.

Methodology for Locale Evaluation

Example: Locale XXX

(Note: Values in this table are hypothetical and do not represent actual results)

<u>Criteria</u>	<u>Unit of Measure</u>	<u>Raw Value</u>	<u>Standard Value (0 to 5)</u>	<u>Weight</u>	<u>Weighted Value</u>
1. Percentage of service area population/employment that live within 30 minutes travel time (one-way during peak hour).	% of Service Area :				
▪ Population	Population	65%	3.6	15	54
▪ Employment	Employment	68%	3.8	15	57
2. Average travel miles per trip per person served (located within 30 minutes)	Miles per trip per person:				
▪ Population	Population	13	3.4	15	51
▪ Employment	Employment	11	3.2	15	48
3. Adequate range of environmentally unconstrained land	NA	N/A	5	5	25
4. Availability and capacity of public utilities and services	NA	N/A	4	5	20
5. Proximity to existing or proposed mass transit service	NA	N/A	2.8	10	28
6. Opportunities/barriers for connectivity/technology infrastructure readiness	NA	N/A	4.2	20	84
Total Weighted Value					367

E. Results of Locale Analysis

The results of the locale analysis are summarized in the matrix on the following page. Detailed descriptions of how measures were determined for each criterion can be found in Appendix E, Locale Analyses.

The following paragraphs discuss the assessment of locales for each criterion.

1. Percentage of Service Area Population/Employment that Live/Work within 30 Minutes Travel Distance²³

The Arlington locale serves the highest percentage of both Year 2000 service area population (65%) and employment (69%) within a 30-minute one-way travel distance. The Marysville and Everett-North locales rank number two and three, respectively, behind Arlington for both population and employment.

The location of the southern boundary of the service area in South Everett has a major influence on the amount of population and employment “captured” by each locale. The 30-minute travel distance boundaries for the Everett-South, Everett-North, Marysville and Arlington locales each extend to the southern boundary of the service area. In the case of the two Everett locales, the actual 30-minute travel distance extends substantially beyond the southern edge of the service area boundary, yet those residents and employees outside the boundary are not counted in the analysis. The impact of this factor is that the most northern of these four locales, Arlington, ends up capturing the greatest percentage of service area population and employment.

2. Average Travel Miles Per Trip Per Person Served Within 30 Minute Travel Distance

The average miles per trip for the service area population residing within a 30 minute travel distance is lowest for the Everett-North (12.6 miles) and Everett-South (12.7 miles). Marysville ranks third for this criterion (13.4 miles), followed closely by Mount Vernon (13.6 miles). Arlington, which ranks first in the percentage of overall service area population served within 30 minutes, ranks second to last for average miles per trip (16.6 miles). This is a reflection of the relatively lower density of population in the Arlington area when compared to the southern part of Snohomish County.

The Everett-South locale has the lowest miles per trip (9.9 miles) for the service area employment working within a 30-minute travel distance, a reflection of the large concentration of employment in the Paine Field and South Everett areas. The Everett-North (11.2 miles), Marysville (11.2 miles) and Mount Vernon (11.9 miles) locales rank second through fourth in this criterion. Similar to the average miles per trip for population served, the average employee trip miles are lowest for those locales with the highest employment densities (Everett and Mount Vernon). Arlington and Stanwood, located comparatively further away from these two employment centers, have significantly higher average per person trip miles.

²³ Please see Appendix F-1, 30-Minute Travel Distances, for maps illustrating this criterion for each of the locales.

Locale Analysis Summary Evaluation

Criteria	Weight	Everett South		Everett North		Marysville		Arlington		Stanwood		Mount Vernon	
		Raw Value	Standard Value	Raw Value	Standard Value	Raw Value	Standard Value	Raw Value	Standard Value	Raw Value	Standard Value	Raw Value	Standard Value
1. Percentage of service area for year 2000 that live and work within 30 minute travel time (one-way during peak hour)	15	46%	2.3	34.4	2.5	37.8	2.8	41.7	3.3	48.9	3.5	65%	65%
-Population	15	53%	2.6	39.6	2.8	42.3	2.9	42.8	3.5	52.1	3.5	35%	35%
-Employment				74.0		80.1		84.5		101.0			
Sub-totals													
2. Average travel miles per trip per person served (located within 30 minutes)	15	12.7	1.8	27.3	1.9	27.8	1.7	24.9	0.9	12.9	0.4	18.5	0.4
-Population	15	8.9	2.5	38.0	2.2	33.2	2.2	33.0	0.3	5.1	0.2	19.0	0.2
-Employment				65.3		60.9		57.9		18.0			
Sub-totals													
3. Adequate range of environmentally unconstrained land with appropriate land use designations	5	NA	5	25	NA	5	5	25	NA	5	5	NA	5
4. Availability and capacity of public utilities and services by Year 2005	5	NA	5	25	NA	5	5	25	NA	4	4	NA	5
5. Proximity to existing or proposed mass transit service by Year 2005	10	NA	5	50	NA	5	4	40	NA	3	3	NA	4
6. Opportunities and barriers for connectivity and technology readiness by Year 2005.	20	NA	5	100	NA	5	5	100	NA	4	4	NA	4
Totals	100		29	339	29	341	28	332	24	274	19	202	26

Explanation of terms for Criteria 1 and 2
Raw Values represent percent of service area pop (Criteria 1) and travel miles/person served (Criteria 2) for each locale for Year 2010
Standard Value: Raw values have been converted to a scale of 0-5 to allow comparison of all criteria on a common scale.

Explanation of terms for Criteria 3 - 6
Standard Value: Criteria was measured on a qualitative scale - does the locale meet the criteria. A score of 5 is high or good, a score of 1 is low or poor.

Explanation of terms for all Criteria
Weight: Weight describes the relative importance of the criteria in relationship to other criteria. Weight assigned by PCT and PAG members during criteria development stage.
Weighted Value: Standard value multiplied by the weight. This is the total score used to measure the locales.

3. *Adequate Range of Environmentally Unconstrained Land (Criterion 3)*

Based on land capacity analyses completed as part of the current comprehensive plans for the jurisdictions within each locale, it was determined that a sufficient amount of unconstrained, developable or redevelopable acreage with appropriate land use designations will be available within the Urban Growth Boundaries of all six locales.²⁴ Therefore, all locales meet this criterion equally.

4. *Availability and Capacity of Public Utilities and Services (Criterion 4)*

All locales were assessed as either “Very Good” (score of 5) or “Good” (score of 4) in meeting the criterion. Generally, all typical and necessary utilities including electricity and communications systems, natural gas, sewer, water, solid waste disposal and recycling programs are either currently available or are expected to be provided within urban growth areas by the Year 2005. The Arlington and Stanwood locales were slightly less favorable in meeting this criterion due to some uncertainties over the future adequacy of sewage treatment (Arlington) and water facilities (Stanwood).

Local police and fire departments adequately serve all locales.

5. *Proximity to Existing or Proposed Mass Transit Services (Criterion 5)*

The Everett-South and Everett-North locales were assessed as “Very Good” in meeting this criterion, while the Marysville and Mount Vernon locales were assessed as “Good.” The Arlington and Stanwood locales were evaluated as “Adequate.” Both Everett locales benefit from transit service by two providers, Everett Transit and Community Transit. Everett Transit provides service primarily within the City of Everett, with extensions of service into Paine Field, Mukilteo and Eastmont areas. Although Community Transit provides service primarily to areas outside the City, it does provide connections to Everett Transit at key locations such as the Everett Mall and Downtown Everett.

The Everett locales also will have transit service provided through “Sound Move”, the ten-year regional transit plan proposed for the Central Puget Sound region. Sound Move will include expanded regional express bus routes and connections in the Everett area, as well as commuter rail with multi-modal stations in Mukilteo and downtown Everett.

Both Marysville and Mount Vernon provide good transit service, although less extensive than the system serving the Everett area. The Arlington and Stanwood locales are located in less densely populated areas than the other locales, and while transit service is adequate, overall service and ridership are comparatively lower.

²⁴ Please note that the Marysville locale may include land owned by Indian nations not under the jurisdiction of the GMA.

6. Opportunities/Barriers for Connectivity and Technology Readiness (Criterion 6)

The Everett-South, Everett-North and Marysville locales were assessed as “Very Good” in meeting this criterion. The Arlington and Mount Vernon locales were evaluated as “Good,” while the Stanwood locale was assessed as “Adequate”.²⁵

Both Everett locales and Marysville provide opportunities for most telecommunication services including ISDN, T-1 and cable TV. Fiber optic paths are present in all three locales along major arterials, *as is the potential upgrade of Cable TV paths to Internet access*. Additionally, each of these locales has limited barriers for connectivity.

Arlington offers opportunities for technology connectivity that are similar to Everett and Marysville, but has a potential barrier in the form of the possible interference for satellite and microwave transmissions from the Jim Creek Communication Station located east of the city limits. *(This potential barrier may be overcome depending upon the types of technology/communication employed, although likely at a higher price tag and, therefore, lower evaluation score.)* Mount Vernon provides opportunities for connectivity similar to the other locales, except that some satellite services would require a microwave repeater for transmission, again, *at a potentially greater cost than other locales*.

Compared to the other locales, the technology infrastructure in Stanwood is limited. Current fiber optic services is limited and primarily used for regular phone service. There is also very limited service for ISDN and T-1 lines, and while Cable TV is available, it is uncertain whether an upgrade path exists to Internet access.

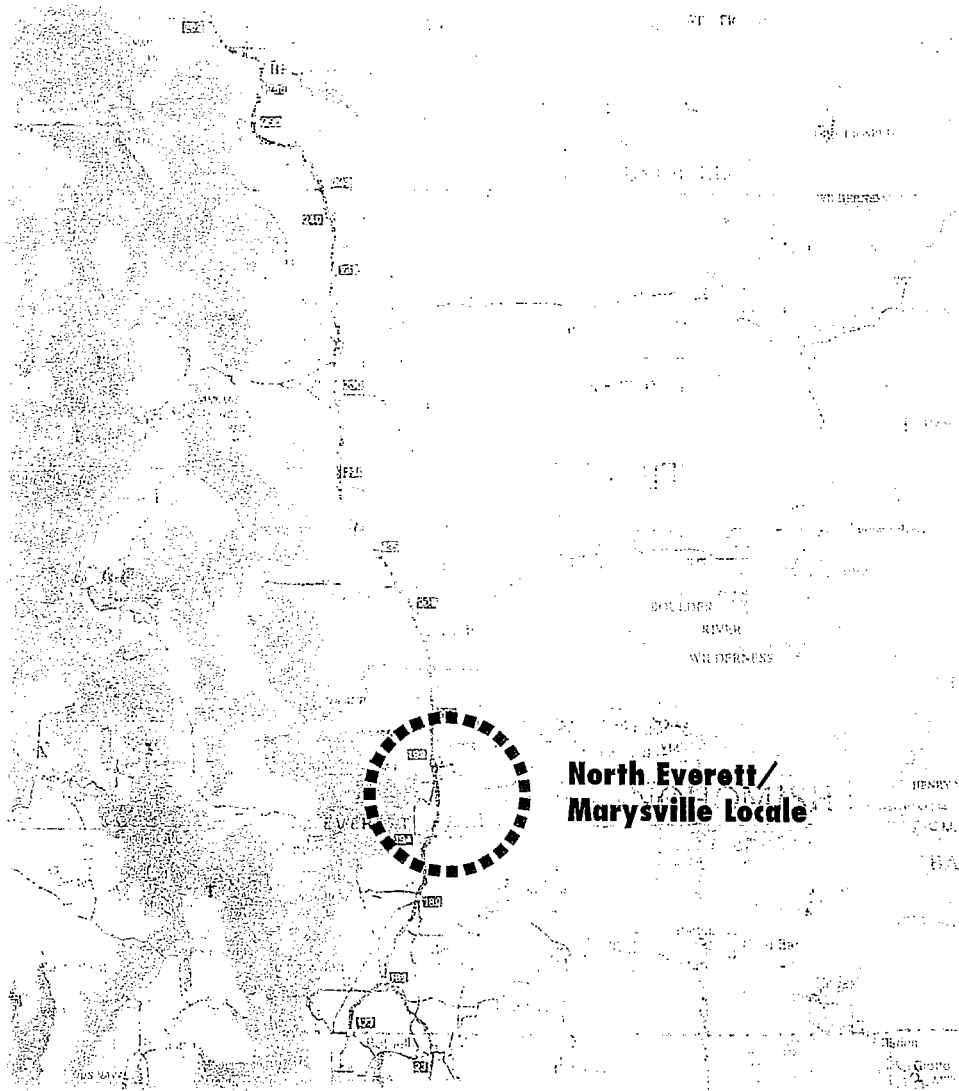
The evaluation results in the Local Analysis Summary Evaluation table show that three locales—Everett-South, Everett-North, and Marysville—have overall weighted scores that are substantially higher than the other three locales. The superior results for these three locales is due primarily to the comparative advantage they enjoy in providing convenient access to the service area population and employment base (Criterion 1 and 2).

F. Recommended Locale(s)

Based on the results of the evaluation process, it is recommended that the Everett-North locale and southern portion of the Marysville locale be selected as the most appropriate areas for locating the CUC (See the following graphic, College & University Center Facility Locale).

²⁵ Please see Appendix E, Locale Analyses, Technology Evaluation, for the detailed assessment of each locale.

Recommended Locale for New College and University Center



While the Everett-South, Everett-North and Marysville locales all received weighted scores that were within 3% of each other, the elimination of the Everett-South locale and northern portion of the Marysville locale (north of 116th Street NE) from further consideration was deemed appropriate for the following reasons:

- The inclusion of all three locales as potential areas for siting the University College Center was believed to comprise too broad of an area to carry forward for detailed site selection analyses in the next phase.
- The Everett-North locale and southern portion of the Marysville locale together represent an area that provides the most balanced response to the two access criteria (Criterion 1 and 2). Criterion 1, which is concerned with the total population and employment served within a 30-minute travel distance, is best served by more northern locations with the three locales. As shown in the Local Analysis Summary Evaluation table, the weighted scores for this criteria are significantly higher for Marysville and Everett-North as compared to Everett-South (Arlington actually has the highest score for this Criterion 1, but falls short of the Everett and Marysville locales overall due to its relatively poorer performance for other criteria).

Criterion 2, which is concerned with serving the greatest number of residents and employees most efficiently (based on average travel time per trip), is best served by more southern locations within the three locales. The Everett-South locale has the highest weighted score for Criterion 2, reflecting the high density of population and especially employment in the vicinity. While the Marysville and Everett-North locales have weighted scores for this criterion that are similar, additional analysis reveals that within Marysville, there is a sharp increase in the average miles per trip north of 116th Street NE.

Therefore, the elimination of the Everett-South locale and northern part of Marysville from further consideration leaves an area comprising Everett-North and South Marysville that together best meet both Criteria 1 and 2.

- A further reason for eliminating the Everett-South locale is its proximity to the UW Bothell collocated campus in northern King County. The first two phases of the UW Bothell campus will accommodate up to 4,000 new upper-division and graduate students. A location for the College and University Center in Everett-South would be too close to the UW Bothell institution, which serves a similar student base. A more northern location within the North Snohomish, Skagit and Island County areas represents a better place to serve students within the service area.

X. SYSTEM DESCRIPTION AND PRELIMINARY CAPITAL COST ESTIMATES

The preliminary capital cost estimates show a significant investment in land and facilities, nearly \$300 million in today's dollars, is needed to accommodate the forecast enrollments of over 9,000 additional FTE in the Year 2020, in a manner meeting the goals and intent of the consortium. While an apparently large capital cost, the College and University Centers represent a measured and phased response to the potential demand for higher education programs, per the "ramp up" assumptions for the upper-division enrollments, the tailored space planning model, and the use of existing infrastructure at community college campuses.

The Development Plans for the existing community college main campuses are the basis for preliminary capital cost estimates. The "normative" tailored space needs for the community college centers and the North Everett/South Marysville Center are the basis for preliminary cost estimates for those facilities. Combined, the system-wide development plan and associated capital cost estimates are shown in the following table, Preliminary Capital Costs.

Please note that these preliminary capital cost estimates are stated in 1998 dollars and are not escalated for inflation or discounted. Subsequent phases of planning will likely include life cycle and present value analyses, that will reflect not only capital and operating costs and revenues, but the time value of money and can identify the trade-offs between various facilities and phasing strategies.

The following subsections describe the unit cost assumptions, break-out the first phase space and cost estimate, and compare the capital costs with other, recently designed/built campuses.

Preliminary Capital Costs

All costs in 1998 dollars; all dollars in thousands

EdCC	FTE	<u>2005</u>	<u>2012</u>	<u>2020</u>	<u>Total</u>
		632	137	86	855
	Lower Division	202	137	86	425
	Upper Division	430	-	-	430
	GSF	51,000	17,000	-	68,000
	Surface Parking	200	-	-	200
	Structured Parking	380	250	-	630
		580	250	-	830
	Project Cost	\$ 22,300	\$ 9,100	\$ -	\$ 31,400

EvCC	FTE	<u>2005</u>	<u>2012</u>	<u>2020</u>	<u>Total</u>
		1,292	703	425	2,420
	Lower Division	1,055	703	425	2,183
	Upper Division	237	-	-	237
	GSF	105,000	57,000	34,000	196,000
	Surface Parking	380	-	-	380
	Structured Parking	652	805	186	1,643
		1,032	805	186	2,023
	Project Cost	\$ 49,800	\$ 30,000	\$ 12,800	\$ 92,600

SVC	FTE	<u>2005</u>	<u>2012</u>	<u>2020</u>	<u>Total</u>
		819	432	288	1,539
	Lower Division	624	432	288	1,344
	Upper Division	195	-	-	195
	GSF	66,000	50,000	23,000	139,000
	Surface Parking	192	278	-	470
	Structured Parking	520	-	173	693
		712	278	173	1,163
	Project Cost	\$ 29,000	\$ 15,000	\$ 9,500	\$ 53,500

CC Centers	FTE	<u>2005</u>	<u>2012</u>	<u>2020</u>	<u>Total</u>
		493	248	157	898
	Lower Division	356	248	157	761
	Upper Division	137	-	-	137
	GSF	40,000	20,000	13,000	73,000
	Surface Parking	383	159	68	610
	Structured Parking	-	-	-	-
	Project Cost	\$ 12,500	\$ 6,100	\$ 3,900	\$ 22,500

COMMUNITY COLLEGE TOTALS					UPPER DIVISION					SYSTEM TOTAL				
	2005	2012	2020	Total		2005	2012	2020	Total		2005	2012	2020	Total
FTE	3,236	1,520	956	5,712	FTE	505	1,884	1,048	3,437	FTE	3,741	3,404	2,004	9,149
Lower Division	2,237	1,520	956	4,713	Site Independent	55	55	55	165	Lower Division	2,237	1,520	956	4,713
Upper Division	999			999	New Center	450			450	Upper Division	1,504	1,884	1,048	4,436
					Unallocated		1,829	993	2,822					
GSF	282,000	144,000	70,000	476,000	GSF	36,000	148,000	80,000	264,000	GSF	298,000	292,000	150,000	740,000
Surface Parking	1,155	437	68	1,660	Suburban Site for New Center					Total Costs				
Structured Parking	1,552	1,055	359	2,966	Surface Parking	298	938	361	1,598	Suburban New Center	\$ 129,000	\$ 113,200	\$ 53,800	\$ 296,000
	2,707	1,492	427	4,626	Structured Parking					Urban New Center	\$ 132,800	\$ 124,900	\$ 58,200	\$ 315,900
Project Cost	\$ 113,600	\$ 60,200	\$ 26,200	\$ 200,000	Land Area	4	13	5	23					
					Project Cost	\$ 15,400	\$ 53,000	\$ 27,600	\$ 96,000					
					Urban Site for New Center					Cumulative Totals				
					Surface Parking	75	235	90	399	Suburban New Center	\$ 242,200	\$ 296,000		
					Structured Parking	224	704	271	1,198	Urban New Center	\$ 257,700	\$ 315,900		
					Land Area	2	6	3	11					
					Project Cost	\$ 19,200	\$ 64,700	\$ 32,000	\$ 115,900					

A. Unit Cost Assumptions

The preliminary capital cost estimates include assumptions regarding unit costs for land acquisition, construction costs (e.g., on-site improvements and utilities, buildings and parking facilities), and project costs as listed in the following table, Unit Cost Assumptions. Unit cost assumptions are largely based on recent, in-house higher education projects, such as the University of Washington, Bothell/Cascadia Community College Co-located campus.

Unit cost assumptions for land acquisition are based on discussions with real estate professionals familiar with the study area, as well as recent land sales or purchases by the community colleges. Land values for both suburban and urban parcels are estimated, since a specific site for the new stand-alone center has not been selected. Seven dollars a square foot for land in suburban areas is a conservative estimate and is based on developable land area (i.e., does not include land with sensitive areas), served by utilities. Twenty-seven dollars a square foot is an estimate for land in urban areas and again, in conservative in an effort to compensate for potential land assembly costs.

Construction costs include on-site improvements and utilities, buildings and parking facilities. On-site prep, improvements and utilities, exclusive of extraordinary site conditions such as hazardous wastes, are expressed as a percentage of building and parking costs and are based on recent, in-house construction experience in the region. The 15% estimated for on-site prep for suburban sites assumes a limited amount of utilities extensions to and throughout the site, while urban and existing campus sites are assumed to have utilities in place.

Unit construction costs for new facilities of \$185 per square foot is some 20% higher than recent higher education facilities cost estimates (e.g., \$155 at UW Bothell), due to consortium planning goals and intent that these buildings be technologically-ready. These costs do not, however, include the costs for major broadcasting abilities or equipment. Construction costs for technology advanced buildings are typically higher due to more extensive mechanical and electrical systems support.

Unit construction costs for parking facilities are \$6 per square foot for surface lots and \$35 per square foot for parking structures. The quantities of surface and structured parking are included in the Development Plans for the existing campuses. All surface parking is assumed for the community college centers and 75% structured parking is assumed for the new center in an urban site.

Off-site mitigation, including transportation and utilities improvements, are determined on a site-specific basis and will be addressed in subsequent phases of planning.

Again, all costs are in 1998 dollars. Capital costs will fluctuate based on inflation, local economic conditions, as well as land supply, demand and speculation, in the case of land acquisition costs. Subsequent phases of planning shall further narrow and refine the range of costs.

Unit Cost Assumptions

Order of Magnitude Cost Estimating Assumptions: March 1998 Dollars

	<u>N Everett/S Marysville Center</u>		<u>Improvements to Existing CC Campuses</u>
	<u>SUBURBAN SITE</u>	<u>URBAN SITE</u>	
LAND ACQUISITION	\$7/SF	\$27/SF	\$7/SF
TOTAL CONSTRUCTION COST, "MACC"			
On-Site Prep, Improvements & Utilities Exclusive of extraordinary site conditions (e.g., hazardous waste)	15%	10%	5%
Buildings Range reflects mix of space types, level of mechanical & electrical systems support	low-rise, 2 -3 story \$185	mid-rise, 3 - 5 story \$185	2 - 5 stories \$185
Parking Surface parking (350sf/stall) (incl. lighting, planting, etc) Structured parking (325sf/stall)	all surface \$6/SF \$35/SF	75% structured \$6/SF \$35/SF	varies by site \$6/SF \$35/SF
PROJECT COSTS			
Taxes	Simplified approach for facilities utilization plan:		
Professional Services (A/E)	45% of construction cost		
Extra Services, Contingency			
Project Management			
Art, Minor Equipment*	To be itemized during pre-design,		
Other & Contingency	compilation of C-100's		
OFF-SITE IMPROVEMENTS & MITIGATION			
Traffic	To be estimated during pre-design,		
Utilities	site selection & EIS		

*Will also apply to existing community college campuses; does not include equipment allowing broadcasting ability

B. Summary of Space and Capital Cost Estimates: Year 2005 and Build-out

The range of capital costs for the facilities and parking and land purchase needed to accommodate 3,741 additional FTE in Year 2005 is between \$129 and \$133 million in 1998 dollars, growing to a total of \$296 to \$316 million by the Year 2020 to accommodate over 9,000 FTE.

Preliminary capital costs for the system are estimated in a range that reflects the difference between a new center located in a suburban site and an urban site. Parking facility costs for the new center are 300% higher at an urban site than at a suburban site, based on the assumption that 75% of the needed stalls are in structured facilities, versus all surface parking in suburban sites. The higher parking costs are partially off-set by lower land costs; the total difference between capital cost for an urban site versus suburban site is roughly 24%. This difference is reduced to below 5% when placed in the context of the system-wide capital costs.

Please note that for budget place-holding purposes, the total cost of land purchase for the new center may be included in the first phase of the project, in order to land bank the property.

Preliminary Year 2005 Expansion Description & Cost Estimates

Capital costs in 1998 dollars; costs in thousands

	Community College Main Campuses			CC Centers	Site Independent	Range for New Center		YEAR 2005 TOTALS	
	Edmonds CC	Everett CC	SVCC			Suburban	Urban	Suburban	Urban
Expansion Description									
Add'l Lower Division FTE	202	1,055	624	356				2,237	
Add'l Upper Division FTE	430	237	195	137	55	450	450	1,504	
	632	1,292	819	493				3,741	same
Test of Fit									
Building GSF	51,000	105,000	66,000	40,000		36,000	36,000	298,000	same
Parking									
Surface stalls	200	380	192	383		298	75	1,453	1,229
Structured stalls	380	652	520				224	1,552	1,776
	580	1,032	712	383		298	298	3,005	3,005
Add'l Land Area (acres)		6				4	2	10	8
Test of Fit Cost Estimates									
Buildings	\$ 9,435	\$ 19,425	\$ 12,210	\$ 7,400		\$ 6,660	\$ 6,660	\$ 6,660	
Parking: Surface	\$ 420	\$ 798	\$ 403	\$ 803		\$ 626	\$ 156	\$ 626	\$ 156
Parking: Structured	\$ 4,323	\$ 7,417	\$ 5,915				2,543		2,543
	\$ 14,178	\$ 27,640	\$ 18,528	\$ 8,203		\$ 7,286	\$ 9,359	\$ 7,286	\$ 9,359
On-site Prep	5%	5%	5%	5%		15%	10%		
Site Prep*	\$ 709	\$ 1,382	\$ 926	\$ 410		\$ 1,093	\$ 936	\$ 1,093	\$ 936
MACC	\$ 14,886	\$ 29,021	\$ 19,455	\$ 8,614		\$ 8,379	\$ 10,295	\$ 8,379	\$ 10,295
Project Cost**	\$ 21,585	\$ 42,081	\$ 28,209	\$ 12,490		\$ 12,149	\$ 14,928	\$ 12,149	\$ 14,928
Planning & Design	\$ 750	\$ 750	\$ 750			\$ 2,000	\$ 2,000	\$ 2,000	\$ 2,000
Land Costs		\$ 6,939				\$ 1,234	\$ 2,266	\$ 1,234	\$ 2,266
Test of Fit Cost*	\$ 22,300	\$ 49,800	\$ 29,000	\$ 12,500		\$ 15,400	\$ 19,200	\$ 129,000	\$ 132,800

* excl. off-site and environmental mitigation

C. Capital Cost Comparison with Other Campuses

The capital costs for the described consortium system are roughly 30% lower than capital costs of recent branch campus development, when viewed on a per capita/FTE basis, as shown in the following table. This is primarily due to the reduced space requirements of the consortium described in the tailored space planning model.

	<u>NSIS II Tailored Model</u>	<u>Branch Campus Standards</u>
Space		
ASF per FTE	53	83
ASF/GSF	.65	.65
GSF per FTE	81	128
Prototypical First Phase		
FTE	2,000	2,000
GSF	105,000	166,000
Facility Cost (rounded, in thousands)	\$29.9	\$39.6
Project Cost (rounded, in thousands)	\$43.3	\$57.4
Project Cost per FTE (excluding on and off-site environmental mitigation and transportation improvements)	\$21,700	\$28,700
Difference from NSIS II		32%

D. Other Alternatives

Other alternatives to the system as described were analyzed during this facilities planning process. The proposed system description was selected for a variety of reasons, including the significant program planning that is the basis for the FTE distributions across the campuses and centers.

The primary alternative to the proposed system involved less intensive development on the existing community college campuses in order to avoid the costly structured parking that is needed on these campuses. This resulted in a significant increase of FTE at the new center in the Year 2005 (i.e., a 2,000 plus FTE versus the 450 FTE), more akin to branch campus development. The capital cost estimates for this alternative are 6%–10% less than for the proposed system, depending on whether a suburban or an urban site is selected for the new center.

XI. NEXT STEPS

The immediate benefits of this analysis include:

- The strengthened partnerships among the PCT members, as evidenced in their consortium mission statement, guiding principles and, especially, the detailed 5-year program plans.
- Continued enthusiasm from the PAG as witnessed by their involvement in the community public forums in the summer of 1998.
- The budget requests prepared by the PCT for interim operating improvements needed to proceed with the project through the next biennium.
- The findings of this analysis as relates to the preferred locale of a new center and the order of magnitude capital costs for the proposed system.
- A better understanding and definition of subsequent phases of project planning, including master plans at each of the existing campuses to explore cost savings options, a system-wide economic model to identify present value capital and operating costs and phasing scenarios, and a technology plan.

A. Toward Implementation: Interim Phase

During the upcoming months, consortium institutions will work together across the region to begin offering courses and programs as part of the College and University Center initiative. The first phase of implementation will be, by definition, experimental, and will entail the development of flexible multi-institutional arrangements related to sharing interim space (e.g., leased facilities) and program support services.

Interim implementation steps include:

- Investigate the options for leasing and sharing of temporary space at NSIS sites, with first priority given to ensuring that programs targeted for 1998-99 implementation have space from which to operate. (CWU, for example, has offered more than 2,000 square feet in the SnoKing building for initiating NSIS consortial program offerings in Lynnwood.)
- Develop a 1999-2001 budget request to the state legislature for funding to cover the costs (to participating baccalaureate institutions) associated with this phase of the project. This request may include:
 - Leasing costs
 - Minimal support for core administrative and academic services (e.g., advising) staff to defray costs to institutions for development and administration of the College and University Centers
 - Technology enhancements to increase distance learning course offerings at some sites.

- Convene groups of institutional representatives in academic support services as student advising, financial aid, libraries, and computing to define common center functions, related resource requirements, and the support needs of each center site. The institutions will develop joint plans and cost-sharing agreements for common development and/or use of these services and facilities.
- Develop memoranda of understanding among institutions that will offer programs and share related resources at interim NSIS sites.
- Each College and University Center will designate an on-site coordinator who will be the primary liaison to member institutions and to the community served by that center. One of the coordinators' central responsibilities will be working with the institutions to develop guidelines for shared use of scheduled space.

B. Long Term Planning

The next phase of this project will likely include site selection for the new center, individual campus master planning, system-wide development economics analyses, and any environmental or SEPA work need for the site selection or campus master plans. The next steps would also likely produce pre-design documents for the next capital budget requests and a system-wide technology plan.

The individual campus master plans and system-wide development economic analyses will likely explore capital cost saving options/strategies such as:

- Expanding existing community college campus boundaries
- Creating or expanding community college satellite operations
- Operating off-site parking or shuttle services
- Maximizing the use of public transportation
- Exploring joint state-municipal development, particularly for structured parking

Life cycle and present value analyses would allow decision-makers to understand the total cost of education in the study area, by incorporating both operating and capital costs, as well as exploring different phasing strategies for development. The PCT members, in particular, are interested in identifying potential operating cost savings that may be realized by sharing resources and personnel across the campuses. Phasing strategies may include building and parking leasing options, collocation, and various forms of development and ownership.

Appendix A

PCT & PAG Members

North Snohomish/Island/Skagit Counties Study (Phase II)
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Appendix B

NSIS Guiding Principles

North Snohomish, Island & Skagit Counties College and University Centers

GUIDING PRINCIPLES

1. The operations and governance of the College and University Centers should be compatible with the jurisdiction and goals of existing governing bodies, including Boards of Trustees/Regents, the Higher Education Coordinating Board, and the State Board of Community and Technical Colleges.
2. The College and University Centers will develop programs, locations, and delivery methods that serve the region and this development will be compatible with the strengths of existing campuses. The College and University Centers will reflect the combined strengths and complementary programs and delivery methods of the partner colleges and universities. The Centers will offer high-quality degree programs at the associate, baccalaureate, and graduate levels. In addition, the institutions are committed to providing a wide range of continuing education opportunities, from pre-baccalaureate professional-technical and workforce training programs, to post-baccalaureate certificate programs.
3. The operating and governance structure will be one that builds on these strengths and this complementarity to create and support a truly flexible, diverse, dynamic, and responsive organization.
4. The College and University Centers is a commitment in perpetuity by the partner institutions to provide citizens of the region with access to education degrees and programs.
5. The College and University Centers will respond to community and economic needs, considering both immediate and long-term goals of the region, recognizing the range and variety of community, economic, and cultural needs of this diverse geographic region.
6. The College and University Centers will make use of existing and new technologies, such as cable and direct satellite broadcast, that will allow, wherever appropriate and desirable, students to access education in many locations: at community colleges, at the stand-alone facility, at their places of work, and in their homes.

7. The College and University Centers will provide much needed access to educational programs in a part of the state where such access is vital. Such a commitment should be recognized as a commitment to *additional* access and should not compete with or undermine the support of students who are currently enrolled or projected to enroll on our campuses.
8. The College and University Centers will design and develop programs with careful attention to accreditation issues faced by individual campuses and programs.
9. Tuition rates and other financial issues should be consistent with existing institutional policies for the same or similar programs.
10. In order to develop, operate, and sustain academic programs and services at the community colleges and nucleus facility, the College and University Centers will require additional resources beyond the revenues generated by enrollment increases and student tuition.
11. The College and University Centers will be attentive to the needs of historically under-served populations, including African American, Hispanic, and Native American communities in the region.
12. The future shape and direction of the College and University Centers should be determined by mixtures of the programs that must be responsive to changing economic, demographic, community, and citizen goals.
13. And, finally and most important, the College and University Centers initiative represents an uncommon opportunity for the citizens of the region and the partner institutions to develop an operating plan and a governance structure – based upon trust and collaboration – that allows them to overcome obstacles and avoid divisiveness. Such a structure is important for two reasons: to allow the importance and value of the College and University Centers to be the highest priority and to develop a model of cooperative delivery of higher education that may be replicated in other underserved areas of the state.

Appendix C

**Baccalaureate Program Plans by Center
(1998-2005)**

NSIS College and University Centers: 1998 - 2005

Everett/Marysville Center			
Convening Institution:		Originating Institution	Begin to Implement
UW	Program		
	Business & Public Administration		
Everett/Marysville	BS Accounting	CWU	1998-99
Everett/Marysville	BS Business Administration	CWU	1998-99
Everett/Marysville	BA Public Relations	CWU	2001-05
Everett/Marysville	BA Business (1 concentration)	UW Bothell	2001-05
Everett/Marysville	BA Hotel & Restaurant Administration	WSU	1999-01
Everett/Marysville	MBA/MS Management	CWU	1999-01
Everett/Marysville	Master of Public Administration (MPA)	UW	1999-01
Everett/Marysville	MS Organization Development	CWU	1998-99
Everett/Marysville	MS Professional Accounting	CWU	1999-01
Everett/Marysville	Certificate: Public Accountancy	CWU	2001-05
	Education		
Everett/Marysville	BA Elementary Education	WWU	1999-01
Everett/Marysville	BA Special Education	WWU	1999-01
Everett/Marysville	MA English as a Second Language	CWU	2001-05
Everett/Marysville	Endorsement: Bilingual Education	CWU	2001-05
Everett/Marysville	Endorsement: Special Education	CWU	2001-05
Everett/Marysville	M.Ed. Adult Education & Administration	WWU	2001-05
	Engineering		
Everett/Marysville	BS Applied Science Engineering & Env. Sci	WWU	2001-05
Everett/Marysville	Addtl. Programs in Engineering, and Advanced and Emerging Technologies	UW	2001-05
	Health & Human Services		
Everett/Marysville	BA Human Development	WSU	1998-99
Everett/Marysville	BA Human Services	WWU	1999-01
Everett/Marysville	MS PE Health Leisure Svc/EMS Administration	CWU	1999-01
	Liberal Arts		
Everett/Marysville	BA Liberal Studies (1 conc)	UW Bothell	2001-05
	Natural Resources		
Everett/Marysville	Natural Resources Courses	UW	1999-01
Everett/Marysville	BS Natural Resource Science	WSU	1999-01
	Science & Technology		
Everett/Marysville	BS Technical Writing	UW	1999-01
Everett/Marysville	BS Computing & Software Systems	UW Bothell	2001-05
Everett/Marysville	BS Industrial Technology	CWU	1998-99
Everett/Marysville	BS Computer Science	CWU	2001-05
Everett/Marysville	BS/MS Chemistry	CWU	2001-05
Everett/Marysville	BS General Agriculture	WSU	1999-01
Everett/Marysville	BS Applied Biology	WSU	1999-01
Everett/Marysville	M. Technical Management	WSU	2001-05
	Social Sciences		
Everett/Marysville	BA Law & Justice	CWU	1998-99
Everett/Marysville	BS Economics	CWU	1999-01
Everett/Marysville	BA International Studies/Interdisc.	CWU	1999-01
Everett/Marysville	BA/BS Psychology	CWU	2001-05
Everett/Marysville	BA Social Science	WSU	1998-99
	Other Professional Programs		
Everett/Marysville	MS, Building Construction	UW	1999-01
Everett/Marysville	Additional Certificate Programs	UW	2001-05

NSIS College and University Centers: 1998 - 2005

Edmonds Center			
Convening Institution: CWU	Program	Originating Institution	Begin to Implement
	Business		
Edmonds CC	BS Accounting	CWU	1998-99
Edmonds CC	BS Business Administration	CWU	1998-99
Edmonds CC	BA Public Relations	CWU	2001-05
Edmonds CC	BA Business (1 concentration)	UW Bothell	2001-05
Edmonds CC	BA Hotel & Restaurant Administration	WSU	1999-01
Edmonds CC	MBA/MS Management	CWU	1999-01
Edmonds CC	MS Organization Development	CWU	1998-99
Edmonds CC	MS Professional Accounting	CWU	1999-01
Edmonds CC	Certificate: Public Accountancy	CWU	2001-05
	Education		
Edmonds CC	BA Elementary Education	WWU	1999-01
Edmonds CC	BA Special Education	WWU	1999-01
Edmonds CC	MA English as a Second Language	CWU	2001-05
Edmonds CC	Endorsement: Bilingual Education	CWU	2001-05
Edmonds CC	Endorsement: Special Education	CWU	2001-05
Edmonds CC	M.Ed. Adult Education & Administration	WWU	2001-05
	Engineering		
Edmonds CC	Engineering Courses (undergrad, 2+1+1)	UW	1999-01
Edmonds CC	BS Applied Science Engineering & Env. Sci	WWU	2001-05
	Health & Human Services		
Edmonds CC	BA Human Development	WSU	1998-99
Edmonds CC	BA Human Services	WWU	1999-01
Edmonds CC	MS PE Health Leisure Svc/EMS Administration	CWU	1999-01
	Liberal Arts		
Edmonds CC	BA Liberal Studies (1 conc)	UW Bothell	2001-05
	Natural Resources		
Edmonds CC	Natural Resources Courses	UW	1999-01
Edmonds CC	BS Natural Resource Science	WSU	1999-01
	Science & Technology		
Edmonds CC	BS Technical Writing	UW	1999-01
Edmonds CC	BS Industrial Technology	CWU	1998-99
Edmonds CC	BS Computer Science	CWU	2001-05
Edmonds CC	BS Computing & Software Systems (1 conc)	UW Bothell	2001-05
Edmonds CC	BS/MS Chemistry	CWU	2001-05
Edmonds CC	BS General Agriculture	WSU	1999-01
Edmonds CC	BS Applied Biology	WSU	1999-01
Edmonds CC	M. Technical Management	WSU	2001-05
	Social Sciences		
Edmonds CC	BA Law & Justice	CWU	1998-99
Edmonds CC	BS Economics	CWU	1999-01
Edmonds CC	BA International Studies/Interdisc.	CWU	1999-01
Edmonds CC	BA/BS Psychology	CWU	2001-05
Edmonds CC	BA Social Science	WSU	1998-99

NSIS College and University Centers: 1998 - 2005

Everett Center			
Convening Institution:		Originating Institution	Begin to Implement
WWU	Program		
	Business		
Everett CC	BS Accounting	CWU	1998-99
Everett CC	BS Business Administration	CWU	1998-99
Everett CC	BA Public Relations	CWU	2001-05
Everett CC	BA Business (1 concentration)	UW Bothell	2001-05
Everett CC	BA Hotel & Restaurant Administration	WSU	1999-01
Everett CC	MBA/MS Management	CWU	1999-01
Everett CC	MS Organization Development	CWU	1998-99
Everett CC	MS Professional Accounting	CWU	1999-01
Everett CC	Certificate: Public Accountancy	CWU	2001-05
	Education		
Everett CC	BA Elementary Education	WWU	1999-01
Everett CC	BA Special Education	WWU	1999-01
Everett CC	MA English as a Second Language	CWU	2001-05
Everett CC	Endorsement: Bilingual Education	CWU	2001-05
Everett CC	Endorsement: Special Education	CWU	2001-05
Everett CC	M.Ed. Adult Education & Administration	WWU	2001-05
	Engineering		
Everett CC	Engineering Courses (undergrad, 2+1+1)	UW	1999-01
Everett CC	BS Applied Science Engineering & Env. Sci	WWU	2001-05
	Health & Human Services		
Everett CC	BA Human Development	WSU	1998-99
Everett CC	BA Human Services	WWU	1999-01
Everett CC	MS PE Health Leisure Svc/EMS Administration	CWU	1999-01
	Liberal Arts		
Everett CC	BA Liberal Studies (1 conc)	UW Bothell	2001-05
	Natural Resources		
Everett CC	Natural Resources Courses	UW	1999-01
Everett CC	BS Natural Resource Science	WSU	1999-01
	Science & Technology		
Everett CC	BS Technical Writing	UW	1999-01
Everett CC	BS Industrial Technology	CWU	1998-99
Everett CC	BS Computer Science	CWU	2001-05
Everett CC	BS Computing & Software Systems (1 conc.)	UW Bothell	2001-05
Everett CC	BS/MS Chemistry	CWU	2001-05
Everett CC	BS General Agriculture	WSU	1999-01
Everett CC	BS Applied Biology	WSU	1999-01
Everett CC	M. Technical Management	WSU	2001-05
	Social Sciences		
Everett CC	BA Law & Justice	CWU	1998-99
Everett CC	BS Economics	CWU	1999-01
Everett CC	BA International Studies/Interdisc.	CWU	1999-01
Everett CC	BA/BS Psychology	CWU	2001-05
Everett CC	BA Social Science	WSU	1998-99

NSIS College and University Centers: 1998 - 2005

Skagit Valley Center			
Convening Institution: WWU or WSU	Program	Originating Institution	Begin to Implement
	Business		
Skagit Valley College	BS Accounting	CWU	1998-99
Skagit Valley College	BS Business Administration	CWU	1998-99
Skagit Valley College	BA Public Relations	CWU	2001-05
Skagit Valley College	BA Business (1 concentration)	UW Bothell	2001-05
Skagit Valley College	BA Hotel & Restaurant Administration	WSU	1999-01
Skagit Valley College	MBA/MS Management	CWU	1999-01
Skagit Valley College	MS Organization Development	CWU	1998-99
Skagit Valley College	MS Professional Accounting	CWU	1999-01
Skagit Valley College	Certificate: Public Accountancy	CWU	2001-05
	Education		
Skagit Valley College	BA Elementary Education	WWU	1999-01
Skagit Valley College	BA Special Education	WWU	1999-01
Skagit Valley College	MA English as a Second Language	CWU	2001-05
Skagit Valley College	Endorsement: Bilingual Education	CWU	2001-05
Skagit Valley College	Endorsement: Special Education	CWU	2001-05
Skagit Valley College	M.Ed. Adult Education & Administration	WWU	2001-05
	Engineering		
Skagit Valley College	Engineering Courses (undergrad, 2+1+1)	UW	1999-01
Skagit Valley College	BS Applied Science Engr. & Env. Sci	WWU	2001-05
	Health & Human Services		
Skagit Valley College	BS Nursing	UW Bothell	1999-01
Skagit Valley College	BA Human Development	WSU	1998-99
Skagit Valley College	BA Human Services	WWU	1999-01
Skagit Valley College	MS PE Health Leisure Svc/EMS Admin.	CWU	1999-01
	Liberal Arts		
Skagit Valley College	BA Liberal Studies (1 conc)	UW Bothell	2001-05
	Natural Resources		
Skagit Valley College	Natural Resources Courses	UW	1999-01
Skagit Valley College	BS Natural Resource Science	WSU	1999-01
	Science & Technology		
Skagit Valley College	BS Technical Writing	UW	1999-01
Skagit Valley College	BS Industrial Technology	CWU	1998-99
Skagit Valley College	BS Computer Science	CWU	2001-05
Skagit Valley College	BS Computing & Software Systems (1 conc.)	UW Bothell	2001-05
Skagit Valley College	BS/MS Chemistry	CWU	2001-05
Skagit Valley College	BS General Agriculture	WSU	1999-01
Skagit Valley College	BS Applied Biology	WSU	1999-01
Skagit Valley College	M. Technical Management	WSU	2001-05
	Social Sciences		
Skagit Valley College	BA Law & Justice	CWU	1998-99
Skagit Valley College	BS Economics	CWU	1999-01
Skagit Valley College	BA International Studies/Interdisc.	CWU	1999-01
Skagit Valley College	BA/BS Psychology	CWU	2001-05
Skagit Valley College	BA Social Science	WSU	1998-99

NSIS College and University Centers: 1998 - 2005

Other/Independent Sites			
		Originating Institution	Begin to Implement
Convening Institution: n/a	Program		
Employers, Home			
	Global Trade, Transp., Logistics Courses (grad)	UW	2001-05
	MS, Computer Science & Engineering	UW	2001-05
	MLS (Library & Information Science)	UW	1999-01
	MS, Applied Math	UW	1999-01
	Certificate in C Programming	UW	1998-99
	Certificate in Facilities Management	UW	1999-01
	Certificate in Project Management	UW	1998-99
	Certificate in Teaching, Learning, & Tech.	UW	1998-99
	Additional Distance Learning Certificate Progs.	UW	2001-05

Appendix D

Community College Program Plans

Appendix D-1
Existing Community College
Program Inventory

Attachment I- Existing Program Inventory

Existing Occupational/Transfer Programs	Everett CC	Edmonds CC	Skagit Valley CC
Industrial Technology	X	X	
Manufacturing Technology	ATA		
Electronic Engineering Technology			ATA
Engineering	AAS/ATA	Transfer courses	Transfer courses
Environmental Science	AAS	Transfer courses	ATA/Transfer courses
Human Services	AAS	ATA/AAS	ATA
Marketing, Management	ATA-Mrkt and Mgmt	ATA-Mgmt.; Cert.-Mrkt.	Cert.-Mgmt.
Computer Info systems	AAS	ATA/AAS	ATA/Transfer courses
Building Construction		ATA-Con. Mgmt	
Nursing	AAS		ATA
International Trade/Business		ATA-Intern. Bus.	
Culinary Arts and Hospitality Management		ATA/Certificate	ATA
Business	ATA/AAS	ATA/AAS	ATA
Accounting	ATA-Acct.	ATA-Acct.	ATA-Acct. Clerk
Public Accountancy (Certificate)		X	X
Agricultural Technology			ATA
Law and Justice	ATA/AAS- Crim Justice		ATA-Admin of Justice
Public Relations	X	X	
Early Childhood Education	ATA/AAS	ATA/Transfer Courses	ATA/AA Transfer Degree
Technology Programs for Teachers		X	
Educational Paraprofessional (P-6)	ATA	Contract programs	
Elementary Education	X	X	X
Adult Education	X		

ESL, Bilingual Education	X			
Special Education	X			
Education	AAS		Transfer courses	Transfer courses
Multimedia	AAS-Production		ATA-Visual com.	ATA-Prod. Tech.
Interdisc. Social Science Options	X		X	X
Grad. Programs in science, math and research	X		X	
Liberal Studies (BA)	X		X	X
Psychology	Transfer courses		Transfer courses	X
Chemistry	AAS		ATA- Lab Tech/Transfer courses	Transfer courses
Paralegal			ATA	ATA

Appendix D-2
Future Community College
Program Inventory

Attachment II: Future Program Inventory

Future Programs	Everett CC	Edmonds CC	Skagit Valley CC
Airline/Airport Administration	X		
Geographic Information Sys	X	X	X
International Business	X		X
Legal Assisting	X		
Medical Records Management	X		X
Public Works	X		
Technical Writing	X		
Audiology	X		
Atmospheric Science	X		
Biochemistry	X		
Bioengineering	X		
Biostatistics	X		
Biotechnology	X		
Clinical Health Services	X		X
Community Health	X		X
Genetics/Cell Biology	X		
Gerontology	X		X
Museum Studies	X		
Paper Science	X		
Public Health	X		X
Speech Pathology	X		X
Therapeutic Recreation	X		
Building Construction	X		
Art Education	X		X
Science Education	X		X
Special Education	X		
Technology Education	X		
Tourist Industry Management	X		X
Alcohol Counseling	X		
Chemical Dependency Counseling	X		
Hazardous Materials Handling	X		
Hazardous Materials Management	X		
Paramedic	X		
Respiratory Therapy	X		
Transportation Management	X		
Applied Science		X	
Applied Writing		X	
Electronics and Video		X	
Engineering Technology		X	X

Java-Based Computer Info Sys	X	X	X
Multimedia Technology	X	X	X
Video/Voice Technology	X	X	X
Webmaster Computer Info Sys		X	X
Wireless Communication		X	X
International Business			X
Communications/Public Relations			X
Manufacturing Technology			X
Mediation/Organ. Develop.			X
Transportation Management	X		X
Pharmacy Assistant			X
Licensed Veterinary Assistant			X

Appendix E

Consortia Case Studies

Case Study Institutional Description

	North Harris Montgomery University Center	Virginia Beach Higher Education Center	University Center in Greenville	Southwest Virginia Higher Education Center	Northwestern Michigan College University Center	The University Center / Macomb CC	Higher Education and Advanced Tech Center at Lowry	Higher Education and Applied Tech Center	Ardmore Higher Education Center
Location	Houston, TX	Virginia Beach, VA	Greenville, SC	Abingdon, VA	Traverse City, MI	Clinton Twp, MI	Denver/Aurora, CO	Aberdeen, MD	Ardmore, OK
Year Started	1996 in temp facility Jan '98 in new facility		1987	1992 in leased facility Jan '98 in new facility	1995	1991	1994	1995	1974
Members	Kingwood College Montgom. College North Harris College Tomball College Prairie View A&M U. Sam Houston State U. Texas A&M U. Texas Southern U. U. of Houston The Woodlands Corporation	Old Dominion U. Norfolk State U.	Clemson U. Greenville Tech. Furman U. Lander U. The Medical U. of SC South Carolina State U. USC USC- Spartanburg	Clinch Valley College Radford U. Old Dominion U. U. of Virginia Virginia Highlands CC Virginia Tech	Central Michigan U. Davenport College of Business, Eastern Michigan U. Ferris State U. Grand Valley State U. Lake Superior State U. Michigan State U. Oakland U. Spring Arbor College The U. of Michigan Western Michigan U.	Central Michigan U. Ferris State U. Oakland U. U. of Detroit Mercy Walsh College Wayne State U.	Colorado CC & Occupational Ed System Colorado Electronic CC CC of Aurora, Denver, Front Range, Pueblo, Red Rocks Trinidad State JC U. of CO at Denver U. of CO at Boulder U. of Northern CO CO State U. Western Governors U.	College of Notre Dame Weekend College Loyola College Morgan State U. Towson U. U. of Baltimore U. of Maryland Harford CC Cecil CC MD Transportation Auth. Harford County Gov. Aberdeen Proving Ground	East Central U. Murray State College SE Oklahoma State U. OSU-Oklahoma City
Level of Degrees Offered	Upper Division and Graduate programs	Upper Division and Graduate programs	Upper Division and Graduate programs	Upper Division and Graduate programs	Upper Division, Graduate and Certificate programs	Upper Division and Graduate programs	Lower and Upper Division, Graduate and Certificate programs	Upper Division and Graduate programs	Lower and Upper Division and Graduate programs
Peak Hours	90% evening (no wkend college)	80% evening (after 4pm)	90% eve & wkend	Primarily eve & wkend Day train & conference	Peak hours of instruction are 3-10pm	75% eve, 25% day At capacity 4- 10pm	60% evening, 40% day	80% eve academic; day corp & non- credit training	75% evening, 25% day

Case Study

Institutional Description, continued

	North Harris Montgomery University Center	Virginia Beach Higher Education Center	University Center in Greenville	Southwest Virginia Higher Education Center	Northwestern Michigan College University Center	The University Center / Macomb CC	Higher Education and Advanced Tech Center at Lowry	Higher Education and Applied Tech Center	Ardmore Higher Education Center
Planned Enrollment	4-5,000 HC w/ in 5 yr			2,500 HC capacity (500-600 FTE)	1,818 w/ add'l sf*	1750 HC	10,000 HC w/ in 10 yrs (6-7,000 FTE)		1,500 HC (semester) 800
Facility Size		(50,000 current leased)							
-GSF	72,000 GSF	87,000 GSF new	70,000 GSF*	89,000 GSF	34,000 GSF	70,200 GSF	1 million GSF*	25,300 GSF	35,000 GSF
-Est. ASF	46,800 ASF	facil.	45,500 ASF	49,400 ASF	22,100 ASF	45,600 ASF	650,000 ASF	16,400 ASF	22,800 ASF
-Acres	10 Acres	56,600 ASF		10 Acres	10 Acres	40 Acres	153 Acres (Lowry AFB)	10 Acres	10-15 Acres
ASF/FTE	New 38	New 57	New 26 current/ 34 future	New 82	Refurbished 25	New 23	Refurbished 100 future	New 96	New 28 future
Proximal Location	Adjacent to Montgomery CC (newest of CCs)	New facility will be adjacent to Tidewater	5-10 miles from Greenville Tech College	Collocated with Virginia Highlands CC (100 acre site)	1-2 miles from Northwestern Michigan College	Macomb CC, Center Campus	6 miles from CC of Aurora	7 miles from Harford and Cecile CCs	Adjacent to Ardmore High School
Background/ Population	Serves college service district of 1,000 sq. mi. and 378,000 households in the North Houston region; Strong interest in locating adjacent to a CC; 1 hour distance from all major univs. 80-90% of students employed and returning students ; 50/50 m/f split taking 3-6 credit hours	Centrally located in 5 city region and serves 2 million population; 2nd highest growth region in state. Currently located in near expressway; moving to new site donated by the state. Currently 80% graduate students taking 3 avg. credit hours. Anticipated 50/50 under/grad at new site.	Largest metro. area in state w/ no 4 yr institution; Serves placebound students over a 14 county area; 60% are from Greenville; 6 avg credit hours	Center serves 359,000 population across 14 counties Created by state legislature in 1990 for separate funding requests. Land donated Serves non-traditional students: adults, working FT or PT, 3-9 credit hours seeking degrees. (See note)	Serves a 5 county region in NW Michigan. Bargain purchase for site; endowment funds to renovate & operate facility; Surveyed employees, residents, and students to assess demand. Primarily serves placebound students; 6 avg credit hours	Macomb had highest per capita attending college, but lowest degree completion rate in three county area; Serves 750,000 population in high growth/low unemployment area. Serves place-bound, working students, 30/70 male/female; 6 avg credit hours.	Project results from the closing of Lowry AFB and redevelopment to a multi-use site. The AFB is planned to become a residential community, business center, educational and research hub, and recreation area serving the immediate metro Denver area and beyond.	Region had long wanted an academic campus. Land surplus from highway construction projects. Facility serves time and place bound students. Also designed for economic development w/ R&D facility and business center. 3 avg. credit hours	Serves a 7 county area. Serves nontraditional students; 80% are continuing or returning students. Students take 6-10 credit hours.

Case Study

Institutional Description, continued

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Mission	To provide bachelor's degrees, master's degrees and continuing studies to the more than one million people in the college district service area.	To provide higher educational opportunities for the residents of Virginia Beach.	To increase access to ed opportunities for citizens of greater Greenville metro area; To develop, coordinate, & promote degree programs & credit courses at junior, senior & grad levels; Through inter-institutional cooperation & diverse delivery systems (including day, eve, & wkend classes & dist. ed.) the University Center serves traditional and non-traditional students; To serve the needs of students who want to pursue 4-yr and grad degrees w/o having to leave Greenville metro area.	To stimulate economic growth and enhance the quality of life in southwest Virginia by providing career development opportunities through its undergraduate and graduate degree, continued professional education and specialized training programs for the region's top-level managers and executives.	To deliver programs beyond the associate degree level that will help fulfill the educational needs of the citizens of NW Michigan. The quality of life in an area is directly related to the intellectual development and employability of its citizens. By working closely with area residents, businesses, government leaders and educators, the University Center intends to deliver educational offerings that ... will enhance the economic, social and cultural aspects of NW Michigan.	To increase access to advanced education. To provide an alternative to "going away" to college or attending an isolated university extension center.	To create an environment that will give students access to leading edge technologies in classrooms and laboratories, and offer Colorado business and industry a wide array of models, demonstrations and commercial opportunities. Linked to these capabilities is a state-of-the-art telecommunication s and information network for virtual teaching and learning that is already reaching people throughout Colorado, the nation and around the world.	To form a collaborative venture between the public and private sectors to address the unique and varied economic and educational needs of the NE Maryland region. HEAT... demonstrates that local, state and private resources can be combined to produce practical and effective solutions to regional problems. The HEAT Center provides for the effective use of state-owned land, an incentive program to encourage high technology businesses...and establishes a higher education center to serve citizens and the econ. development needs of the region.	To provide higher educational opportunities for the residents of Ardmore and surrounding southern Oklahoma counties.

Case Study

Institutional Description, continued

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Notes	On the site there is a 6,000 sf Center for Technology and Distance Learning; it is used by the district for curric dev and training, and was not included in the overall GSF of the Center		Voorhees U. has had to discontinue as consortium member due to budgetary constraints; *Total facility is 92,000sf; remainder is rented to SBA	1/3 of sf designed as conference center facility that is convertible for student use (see technology notes)	*22,000sf expand area in renovated bldg; (20% growth from 1-2nd yr/ 6% from 2-3rd)	The facility was designed to accommodate roughly 1100 students; Sci/Tech facility is designed to accommodate 650 students	Facility capacity roughly 1 mil. GSF		20 additional evening classes taught in the adjacent high school facilities
			Day classes will increase in May '98 when 25 more F/T MUSC students arrive	Credit hours are increasing from avg 3 to 6 -9 as more courses are offered in the evenings.					

Case Study Facility Description

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Location	Houston, TX	Virginia Beach, VA	Greenville, SC	Abingdon, VA	Traverse City, MI	Detroit, MI	Aurora, CO	Aberdeen, MD	Ardmore, OK
Facility size	72,000 GSF	50,000 GSF current 87,000 GSF new	70,000 GSF 22,000 flex/expand	89,000 GSF	34,000 GSF 22,000 flex/expand	63,000 GSF 2nd Sci/Tech 55,000	1,000,000 GSF	25,300 GSF	35,000 GSF
Hours of Operation	8am-9pm M-Th ; Wed til 10pm; 8am-5pm F-Sat	8am-10pm M-F til 6pm Sat 12:30-5:30 Sun	8am-10:15pm M-Th 8:30am-2pm F 8am-noon Sat 11am-6pm Sun	8am-9:30pm M-F 8:30am-5pm Sat 1:30pm-5pm Sun	8a.m-11p.m. M- F; 8a.m-5p.m. on weekends	8am-11pm M- Th 8am-4:30pm F 8am-4pm Sat	7am-11pm M-F 8am-8pm Sat 8am-4:30pm Sun	8am-10pm M-F 7:30am-4pm Sat	7:30am-9pm M- Th 7:30am-4:30pm F Occasional weekends
Classrooms -Traditional	24 classrooms - tech ready	52 rooms @ 24 seats	17 rooms @ 20- 36 seats	20 rooms @ 30 seats	3 @ 20-26 @ UC 3 @ 20-26 @ NMC			3 @ 30 seats 1 @ 30 seats 3 @ 20 seats	1 @ 36 seats 1 @ 54 seats 2 @ 25 seats
-Interactive	8 rooms @ 42 seats	10 ITV rooms	13 @ 6-32 seats	5- @ 25-30 seats w/2-way interactive, VTEL phone conf. & state fiber optic network	15 ITV @ 20- 26 seats w/ connections to high schools	1 2-way Internet, but no broadcast @ seats		1 room @25 seats with 2 way ITV	2 @ 25 seats 1 @ 8 seats reserved; building one more
-Conference	6 @ 4 seats-tech ready		1 @ 8 seats	1 tiered conf/class @ 100 seats- tech ready	Oleson Center @ NMC	1 multipurpose @ 60 seats		2 @ 10 seats Bldg 1	1 @ 25 seats
-Seminar	7 @ 12-15 seats		5 @ 14-18 seats	6 @ 4-12 seats	4 @ UC				
-Lecture/ Auditorium	1 @ 85 seats- tech and laptop ready		1 @ 56 seats	1 @ 1,500 seats (13,000sf) w/22 foot ceilings, tech & tradeshow ready	1 @ 386 seats at NMC	1 @ 175 seats			

Case Study

Facility Description, continued

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Classrooms, continued	No wet labs; 1 enginr/ communications lab; share wet lab w/ CC	Current bldg has no wet labs; rely on CC space if needed; 1st new bldg - No labs	MUSC has 3 labs for their programs	1 @ 10 wet stations for 20 students; general use; mobile computers; adj. space roughed in for add'l lab - or will lease space; high reliance on computers	Demo lab, need better wet lab; rely on NMC existing labs if needed	In new Sci/Tech bldg	2 bio labs; 2 chem labs; 2 physics labs	1 wet lab @ 16 stations	2 wet labs @ 30 stations Need another lab
-Other		900 students currently receive ITV instruction (new facility will broadcast)	4 @ 12-19 seats	All rooms have moveable multimedia podiums and tech hook-ups; one 30 seat observation lab	30% of classes at taught at NMC facility		Each institution has one ITV room; ETTC will have 3 "classrooms of future" @ 15 seats		Currently 40 ITV courses/semester 10 beamed out Rely on use of high school classrooms
Faculty Space -FT / PT	All F/T mandated (unless brokered industry courses)		All F/T have dedicated offices	All F/T from main campuses	F/T & P/T	F/T & adjunct split	Univ level all F/T CC level mostly P/T	50% F/T	Many faculty live/teach in Ardmore; P/T faculty employed by institutions
-Commuting	Commuter or beam in			Commuter or ITV	Some commute		Mostly on-site	Some commuting	

Case Study Facility Description, continued

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Faculty Space, Continued									
-Shared	All faculty suite space shared w/ all institutions including computers (w/ authentication); locked cabinets for 60 available; prep area; conf rooms; coffee area	Currently no faculty offices; faculty can schedule lounge & conference spaces; New facility will have 16 faculty offices w/ 1 clerical staff	A faculty lounge is provided	All space shared suite w/ locking drawers/shared computers; used by diff faculty each night of week; 10 faculty present at any one time; no clerical support; broadcast out from rotating locations	Institutions lease office space in center at set it up to their specifications	Each univ has its own faculty bay; they decide how those are shared (some share desks and computers); faculty lounge, conf, rooms, & offices used for prep space	Utilize landscape- type office setup - open 40x40 w/ 6 desks; each faculty will have own desk; P/Ts have locked space w/ shared desk & shared PC	Two 8-seat offices are shared by members for faculty/admin space	Have general faculty offices, but will change to permanent offices for faculty who teach half-time or more
-Dedicated	no	70% allocated to ODU/30% Norfolk	yes	no	yes	yes	yes	no	
Admin Space -Part time -Full time	2 P/T techies No FT on-site; shared space & resources; no dedicated space; can schedule areas; use CU- See-Me tech	Center has no separate staff; all hires of campuses	8 offices dedicated for admin area used 4 days per week; Identified need for library & media center admins; Clemson U is employer	1 suite w/ 12 dedicated & 7 open offices w/ common work room, reception area, lounge & kitchen. Institutional reps have offices in the admin suite	3 P/T 8 F/T partner school staff plus full time UC staff		All F/T staff	2 F/T, 4 P/T staff on site Bldg 1 - 2 @ 8 seat office used for HEAT center staff; 1 @ 8 seat office shared by members for faculty/admin space; share computers	Only 8 people F/T - 5 admin staff and biz office; 3 P/T - library and computer service; share office space

Case Study

Facility Description, continued

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Student Services space - GSF	Use CU-See-Me technology to main campuses for advising and counseling, tutoring; Inter-institutional sharing of student data; both on-site and electronic registration.	Online registration and fee payment; student services no an important role in planning for buildings		Servers connect all institutions allowing for support services from main campuses; Need for one on-site one position.	Use on-site coordinators; not much electronic yet	Use kiosks for some services; registration by partners, but facilitated at center		Open house and registration occurs in scheduled classroom space and staff space.	Planned statewide kiosk system for articulation; online reg; Need an on-site financial aid advisor since state regs create problems for consortial distribution
Library - GSF	Est. 15-2000sf w/ computer terminals; some reliance on CC library; 4 stacks of reserves and ref. (can hold 500 books total)	1 prof. librarian; no reference materials; no stacks; use this in current facility and says works	UCG students can use any member inst. library facilities; members are responsible for making resources available for accreditation reqs.	Electronic library on-site	400 GSF Holds reserve readings; 2 library assistants	No traditional library; no librarians; rely on staff from Macomb	In process of planning combined student services and library area of 15k sq ft	No separate library facility; no librarians; no stacks; use interlibrary loan through interoffice mail	6,000 GSF built 1984 Very committed to having same resources as students on main campuses; 30,000 volumes; 300 paper & microfiche; 2 librarian
-Media Center	On-site training center (6,000 SF) used by the district, not included in the overall reported GSF		Received foundation grant for room build-out & equipment; used as a Virtual Library	At Virginia Highlands CC			Separate Ed Tech Training Center w/ state of art facilities and onsite multi-media/telecom industry experts; mostly production		A/V & computers part of library space
-Inter-Institutional Ties	TEXSHARE-overnight courier for inter lib. loan; joint purchase of electronic resources Use Montgomery CC for holdings, share librarian	Have inter-lib. loan service w/ courier making 2 trips/day; 1-day turn around	Rely on inter library loan; Media Center is tied to all member institution libraries via Internet	Can utilize VA H. CC library, but students use mostly for tech support; otherwise Electronic library	Linked to NMC library; part of U. of Michigan regional digitized library agreement	Utilize electronic ties to the Univ. of Michigan and inter-lib. loan w/ U. Michigan and others	Relying on univ library 20 min. away, Aurora CC library 2 mi away, nearby public library and inter-lib loan	Rely on Harford library 5 miles away; reserve materials held at Harford	Statewide electronic database subscriptions; utilize inter lib. loan for other needs

Case Study

Facility Description, continued

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Library - GSF, cont.									
-Technology orientation	Electronic LRC; digital catalogue, databases, TV/VCR, CD-Rom - 20 computers; 10 video stations; trying for home access to Internet holdings	Library is electronic	12 pentium 133 computers & 2 high speed printers available for student use	Part of VIVA statewide virtual library system of retrieval and borrow	Electronic library; CD-Rom based; Fax access to resources; 3 TV/VCR; Inter-library Fed-Ex send; students pay slow return; says library not used much	Rely on electronic catalogue access and electronic databases	Likely electronic and tie-in to CC libraries; limited hard copy material	Rely on electronic search and retrieve capabilities	Catalogue on Internet
Open lab		Open 50 seat lab is located in the library		In Resource Center; 12 stations plus online career center	Main computer lab w/ dedicated search computers	Library is comprised of a room of PCs	Library will be a general computing lab	Use general computer lab	10 search and general use computers
Computer Labs	1 70 station open lab 1 station lab dedicated	5 instructional labs -2 @ 20 seats -1 @ 26 seats -2 @ 40 seats 1 @ 50 seat open lab	3 pentium 133 labs @ 19, 14 & 12 seats each 1 pentium 200 lab @ 19 seats	2 labs @ 30 seats; 18 PCs and 12 Macs running Novell; 12 roaming Laptops	Located in library; 4 Macintosh and 18 IBM PCs networked to NMC/college network/Internet; students also have access to NMC computer labs	2 w/ 30 Pentiums 1 open w/ 33 Pentiums		1 @ 16 stations; 12 SGI supercomputers	1 @ 26 stations; 900 GSF

Case Study

Facility Description, continued

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Amenities									
-Bookstore	Local + 1-800 # orders		Bookstore open first 15 days of each semester	620 sf plus 688 sf for storage	on-site		Part of planned student services area	no	Open p/t; 200 GSF
-Food Service			Vending machines	Vending and Catering	2 full Vending areas		Just off-site	1 small vending area - no seating At Harford CC	Vending area
-Child care			no	no	Referred off-campus			no	
-Health			no	no	Referred off-campus		In a separate bldg		
-Fitness			no	no	no			At Harford CC	
Notes	Library Needs: Rely on digital search and resources, but also directly reliant on loan circulation; some departments are slow to indicate resources needs.	Proposing keeping top two floors of leased facility as ODU econ dev center for workforce training, non-credit courses with self-generated tuition	Barnes & Nobel services Clemson student's bookstore needs; 24 x 20 ft room; other students rely on main campuses and surrounding bookstores;	Use space during day for private industry conference and training at lower prices than commercial offerings; very remote students attend via ITV at high schools (esp in winter); states need more tech & admin support staff; strong focus on econ dev.	Determined initial space needs via program planning; 1st used CC growth projections but found inadequate for growing upper div demand; recommends planning for peak time space usage	Not doing enough with ITV room; only 30-50% utilized; New Sci& Tech building is very flexible and tech oriented; SF reduced from 65,000 to 55,000 SF due to tech flexibility; will have "snap-on walls."	Will spend \$9.5 mill over next 24 months to make all spaces interactive including dorm rooms	Statewide facilities planning model, not used for HEAT; allows: 1.5 SF per weekly student contact hour (if under 2500 FTE); 1.07 SF per wsch (if over 2500 FTE)	5000 hours of instruction at taught at the adjacent high school - up to 30 classrooms used

Case Study Technology Description

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Location	Houston, TX	Virginia Beach, VA	Greenville, SC	Abingdon, VA	Traverse City, MI	Detroit, MI	Aurora, CO	Aberdeen, MD	Ardmore, OK
% now served via Dist. Ed.	60% live on- site/ 40% uses 2 way voice video; very few degrees that don't have some on-site component	900 students take ITV courses	17 %	25% off-site - varies by season (remote mountainous region)	1/3 of partners had been doing dist. ed. in uncoordinated manner	30-50% utilization of one ITV classroom; labs recently made internet ready; no remote students from home or work	No % available	20%	No % available; currently less than 5% remote distance ed. Statewide 53% of courses offered via ITV, 8% via Internet, 12% CAI or audio conf.; 27% via TV, cable, or video cassette
% projected to be served via Dist. Ed.	No defined projections; do an environmental scan of potential enrollments due to technology	No defined projections	Will be adding more; in planning stage	Don't plan for higher %, but follow what students want knowing more courses coming online & improvements in 2 way conf.	No higher than 40%	Beginning planning	Goal of 60% online and 40% in hands- on labs in next few years	50%	No large scale plans for participants to go online, apart from statewide initiatives

Case Study

Technology Description, continued

	North Harris Montgomery University Center	Virginia Beach Higher Education Center	University Center at Greenville	Southwest Virginia Higher Education Center	Northwestern Michigan College University Center	The University Center / Macomb CC	Higher Education and Advanced Tech Center at Lowry	Higher Education and Applied Tech Center	Ardmore Higher Education Center
Plans for on-site tech enhancement	Ensured a large enough telecom switch and cable network over their intranet; Developing one-stop database approach to application, admin, articulation, & fees; utilize nearby Center for Distance Learning & Technology	Will continue to produce and sell courses; new facility will allow beaming out of ITV	One more origination site in planning stages	Continue to add/upgrade teleconference equip and computers	Focusing on using existing & planned tech to meet target #s before beefing up remote access. Interested in Web-based program development	Recently installed fiber optics to link campus and continue linkage to regional digital resources. Looking at laptop initiative for faculty and staff.	Content development facility open for 6 months and creates a fraction of needed content; online general AA degree and developing a online business AA transfer degree; pooled funds and moved majority of courseware production from separate institutions to HEAT; reviewing laptop initiatives	Addition of Science/ Environmental wet labs	Will increase ITV and add an add'l ITV classroom; NOT medium of choice - only when face-to face unavailable; joined WGU last year to be assessment site
Plans for off-site access enhancement	Working w/ Texas A&M for enhanced remote library and student services access	Incorporating technology for asynchronous and remote learning in the future	In planning stage	Offer trained facilitators at designated remote sites	Using Michigan Virtual Auto College as a model - offers training and ed programs to the automotive industry via the Internet and other distance-independent Technology; Project Interconnect links 16 high schools in 5 counties w/ 2 way send & receive	In planning stages: has conducted student survey of sync and async instruction to find 60-70% level of interest. Will design accordingly.	Using existing online work of Colorado Electronic CC; working w/ Real Education for development of admin and templates for online courseware; working w/ Jones Intern'l for student services; working w/ NTU, WGU, and Motorola Univ for course/program offerings	Plan to utilize more Web-based courseware	State has put together the Oklahoma Electronic Campus - www.okhighered.org - w/ 600 undergrad, & grad courses from 25 state colleges and universities to meet growing demand of older & place-bound students

Case Study Technology Description, continued

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Statewide initiatives			South Carolina ETV initiative provides ITV access, but not every institution can receive signals	VIVA provides electronic library access & resource sharing; State project to connect all high school through university institutions in Southwest Virginia with 2- way ITV. Fiber optic network existed over 17 county region in high schools, CCs and Colleges - use them as learning centers	28 Michigan CCs agreed to Virtual Learning Area Network for cost savings and standardization; Univ of Michigan Virtual U. is following w/ own digital initiative; telecommunicati ons network created by Merit links hundreds of community colleges, schools, libraries and other public institutions	Oakland University is the hub for the Moa.Net (Macomb - Oakland network) that links 49 public school districts, two community college systems, two intermediate school districts and the university. The Michigan Collegiate Telecommunicat ion Assoc. Network provides a network of telecom facilities across the state.			Floating statewide computer leasing program; can currently purchase off of any other institutions computer order; planned statewide kiosk system for student services; Can register online now, but state regulations prohibit online credit card payment
Partnerships w/ outside entities	Students can buy cheap local Internet access from CCs via MCI Star plan; considering U. of Phoenix to partner for program offerings not currently available from institutions		Maintain relations with outside donors of equipment		Grants from Ameritech & T.C. Rotary		Partnerships with major telecom, software, and systems integrators for free installation and operation as a showcase site for other institutions and businesses; Partner w/ U. of Colorado, Boulder for Advanced Photonics Tech Center	Partnership w/ Aberdeen Proving Grounds and Harford County	

Case Study Technology Description, continued

	North Harris Montgomery University Center	Virginia Beach Higher Education Center	University Center at Greenville	Southwest Virginia Higher Education Center	Northwestern Michigan College University Center	The University Center / Macomb CC	Higher Education and Advanced Tech Center at Lowry	Higher Education and Applied Tech Center	Ardmore Higher Education Center
Existing technology	Facility is completely hardwired, but has wireless capabilities as well (except satellite); Uses desktop video conferencing for remote advising		3 distance education origination sites: T-1, Satellite, ISDN; All rooms wired for receive sites; All rooms have TV/VCR; 64 computers in students labs; 12 in Media Center; 28 in offices	Each classroom ITV & satellite ready; roll- around multimedia podiums available; connected member servers allow support services to students from main campuses	"Project Interconnect" links regional high schools for delivery of higher ed instruction. UC system linked state- wide	Use kiosks for some student services until such time as they go online	Education Technology Training Center on HEAT campus- \$7 mil. hardware investment; Rocky Mountain Manufacturing Academy on HEAT site w/ redeployment of infrastructure from Rocky Flats	Followed Bell Atlantic initiative for single ITV classroom; not used to full capacity; proprietary hardware	Ardmore is one of the hubs on the state's ONENET network - similar to WA's K-20 network
Tech support	Dir. Of Info & Interactive Tech w/ 2 techs for night and weekend coverage		Communication s Mgr. oversees computer & distance ed technology; need add'l tech staff	Cost is main issue	Use on-site coordinators for remote distance ed students			Need increased support for high tech equipment	Need to clarify duties of tech facilitator as teacher assistant or tech support only
Training	Faculty @ training center; students-in class w/ orientations from grad students		Member institutions train their own instructors on ITV, although some training occurs at the center by default		NMC primary center for statewide faculty training for ITV		Students complete assessment for training; revising to meet nat'l standards; Faculty need to keep pace with technology, or HEAT can contract for instructors from industry	Undertake professional development on Harford Campus	Training handled by institutions; ITV training for faculty teaching at Ardmore

Case Study Technology Description, continued

	North Harris Montgomery University Center	Virginia Beach Higher Education Center	University Center at Greenville	Southwest Virginia Higher Education Center	Northwestern Michigan College University Center	The University Center / Macomb CC	Higher Education and Advanced Tech Center at Lowry	Higher Education and Applied Tech Center	Ardmore Higher Education Center
Notes	Monies from daytime facilities usage applied to tech fund. Consortium is committed to maximizing the use of technology with interactive delivery systems & telecom for the delivery of instruction; laboratory simulation and observation; library and learning resources support; interconnected student support, data base approach to common application process; transcript analysis & common data elements for report generation.			Given high use of technology, and teachers employed by partners, consortium has a high degree of flexibility to modify teaching models and programs	1-2 years out for on-line services	Goal: Rely on technology, rather than build facilities, in order to meet changing market and community demands. Scaled down facility due to tech from 65,000sf to now planned 55,000sf.	In addition to looking at vendors info, and other institutions, HEAT saw the Air Force Academy in S. Colorado as a good model and leader in interactive learning (e.g., every cadet has a computer); Currently working on online curriculum articulation to meet nat'l standards.	Although the new R&D building is separate from the operational functions of the academic buildings at the HEAT center, it is hoped there will be tech transfer between the activities.	Says tech doesn't reduce spending, but redirects spending; May reduce admin. personnel, but technical support can be more costly; Plan for obsolescence every 3 years; Possible tie-in w/ city for conferences at Convention Center

Case Study Operating/Program Planning Description

	North Harris Montgomery University Center	Virginia Beach Higher Education Center	University Center at Greenville	Southwest Virginia Higher Education Center	Northwestern Michigan College University Center	The University Center / Macomb CC	Higher Education and Advanced Tech Center at Lowry	Higher Education and Applied Tech Center	Ardmore Higher Education Center
Location	Houston, TX	Virginia Beach, VA	Greenville, SC	Abingdon, VA	Traverse City, MI	Detroit, MI	Aurora, CO	Aberdeen, MD	Ardmore, OK
Capital Costs	Not state funded; Land donated by developer looking to enhance value of surrounding property (adjacent to CC); CC district voted on bonds to build facility; Facility owned by the CC District	No State funds; Land donated & given to Center by City of Virginia Beach (including utilities) Center funded new building w/student fees and fund raising - No state funds	State funded \$4 million renovation of facility; GTEC lowered rent and Center used rent differential to secure equipment; Greenville Tech College owns facility.	Capital \$ came from General Assembly; Capital Bond of \$9.9 million issued for planning, construction and furnishings	Applied for capital outlay general fund to build NMC spillover classrooms College purchased old Sara Lee site Endowment fund used to renovate bldg & develop an operating budget	Macomb CC passed bond to build the Center. Ongoing bond (\$3.1 million every 4 years) funds capital projects and some operating funds	Lowry AFB conversion to R&D, residential and educational use. Renovation of HEAT site to educational purposes estimated to cost \$40 million Foundations, private sector, federal, state & local gov help fund capital & renovation	Maryland Transportation Authority developed land for HEAT usage off 1-95 Interchange. Harford County contributed funds to construct buildings.	Ardmore school district donated the land; Nobel foundation issued challenge grant; 2 additions built w/ state funds
Cost and Revenue Sharing	Operating budget funded by the Univs; 5 yr projection of semester credit hours prorated to determine budget (will be reviewed in 2 yrs); Each univ has a base obligation fee even if no enrollments w/max. amount stipulated for budget purposes	Center has paid for existing bldg w/state appropriations & will likely continue for new bldg ODU & Norfolk divide usage fees along 70/30 split	Institutions pay \$10,000 base fee annually and apply that to the \$43-44 per credit hour charges Clemson U. is fiduciary agent under the guidance of the SC Commission on Higher Ed	\$245,000 annual budget Partners pay \$50,000 annually for unlimited use of space, technology & staff	Initial operating budget funded by grants Cost sharing relies on annual rental fees paid to Center by member institutions; billed on quarterly basis	Bonds and revenues from classrooms rentals to the univ (w/a base fee for office space); Members pay roughly \$500,000/yr in rental and base fees from univs	As landlord, the Center leverages its size and offerings to solicit grants & other monies; Costs covered by leasing space to institutions at annual fees of: \$5/sf - Community Colls. \$7/sf - Universities \$9.10/sf - outside entities Institutions determine who pays & uses what at the Center	City of Aberdeen supplies water & sewage; HEAT Center gets 6% of tuition for building, lights and other facilities; re-negotiating for tiered increase - w/lower % for new programs and higher % for more established programs	State appropriation used for operating budget; Ardmore collects tuition & refunds institutions based on credit hours are taught at center

Case Study
Operating/Program Planning Description, continued

	North Harris Montgomery University Center	Virginia Beach Higher Education Center	University Center at Greenville	Southwest Virginia Higher Education Center	Northwestern Michigan College University Center	The University Center / Macomb CC	Higher Education and Advanced Tech Center at Lowry	Higher Education and Applied Tech Center	Ardmore Higher Education Center
Program Planning	23 Undergrad 26 Graduate See Web site No program duplication	12 Undergrad Graduate No Web site yet No program duplication Used surveys and focus groups to determine programs Academic Programming Committee that must receive State approval	19 Undergrad 24 Graduate No Web site yet Initial needs assessment done; Board of Dirs assess needs/plans programs (CEO & 1 academic officer from each inst.) and input from a community advisory councils Some insts co-teach & co-award degrees	20 Undergrad 22 Graduate See Web site Each of Univs have a rep in the center that meet weekly to identify program needs (At first, Center solicited campuses to offer programs and offered seed \$ to faculty) All faculty from partner institutions, programs can change at any time	27 Undergrad 15 Graduate See Web site Initial group approval process, curriculum review & articulation scheduling Formed academic programming council; 2nd generation programming based on market research & high-tech conversion	20 Undergrad 7 Graduate See Web site Needs study undertaken by community; Univs pick programs w/ no duplication; CC makes final decision on programs based on quality, benefit to community & articulation	85% Undergrad 15% Graduate See Web site Extensive surveys undertaken to determine emphasis in manufacturing, bio-tech & info/telecom technology; institutions w/ existing programs invited to offer at HEAT; programs will phase in/out as state needs change	8 Undergrad 10 Graduate See Web site No program duplication	8AA 5 Undergrad 4 Graduate Program offerings were anecdotal at first; Now survey the community for needs
	Financial & Fees Committee of Univ members determines who pays how much based on # of semester credit hours and usage of facility		Avg tuition cost is \$132/cr hr.	Tuition goes directly to member institutions.	Each institution registers and collects tuition	Each institution registers and collects tuition Notes that if Center asked for entire operational costs from partners, wouldn't work	Each 4 yr institution registers and collects its own tuition CC of Aurora conducts all admin & receipt of payment for CCs. Each CC gets their own FTE depending on where the program resides	HEAT Center gets 6% of tuition- see above	Tuition is set by Oklahoma State Regents; Tuition = \$49/cr - lower div. \$56.75/cr - upper div \$578.50/cr - grad Ardmore reimburses institutions @ \$35.20/cr - lower div \$46.43/cr - upper div \$68.14/cr - grad

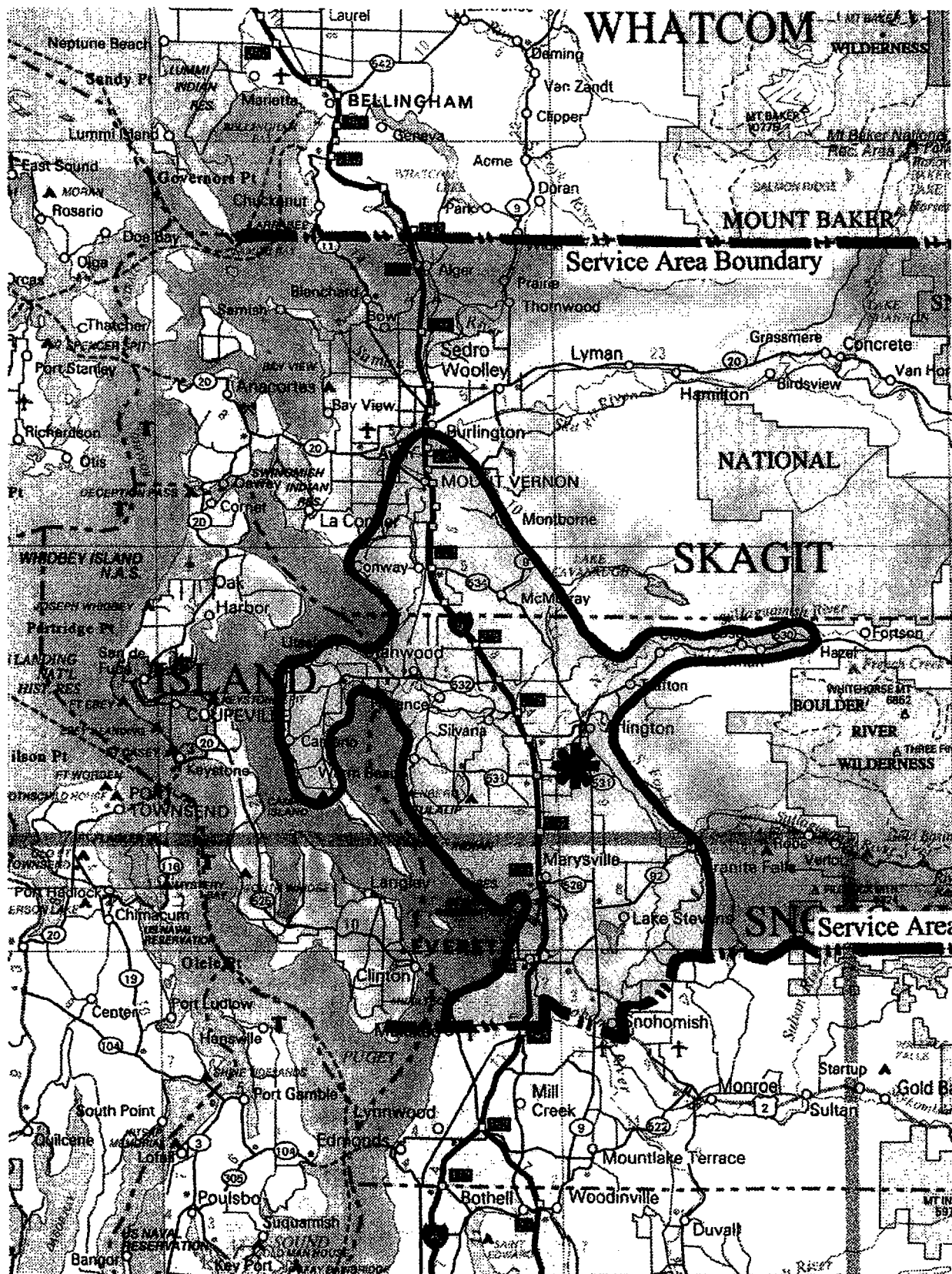
Case Study Operating/Program Planning Description, continued

	North Harris Montgomery University Center	Virginia Beach Higher Education Center	University Center at Greenville	Southwest Virginia Higher Education Center	Northwestern Michigan College University Center	The University Center / Macomb CC	Higher Education and Advanced Tech Center at Lowry	Higher Education and Applied Tech Center	Ardmore Higher Education Center
Revenue Generation	Rent facilities to corps for daytime conf and retreats; Monies go into tech fund		Rent space to the local SBA on continual basis; also rent for biz and tech conferences	Intend to rely on day rental of conf. spaces to private entities to assist operating funds	Rent facilities to corps for daytime conf and retreats	Daytime prof dev courses; want to rent for corp and nearby hospital training	Rent space out to outside entities at rates above	Use for non- credit and corp training during the day	Rent space to corps when available Only conferencing center in region will likely grow to accommodate demand
Notes	Recommends including increased transfer rates from the CCs as part of mission of partnership; Project involved 2 yrs of planning & approval by coordinating board		Governed through a regional coordinating board		"Currently no overall State vision of ed coordination... fierce competition for regional educational offerings. State will, in future, restrict capital funds to force more cohesive (less competitive) regional consortia. Also, competition has forced institutions to place emphasis on student services."	New Sci & Tech bldg will cost \$13 million and will be 50% state funded		Type of building was based on State budget and # of students to be accommodated RFP for design/build process	Tuition costs are higher at Ardmore as students pay for convenience; Have been able to achieve state targets for higher student tuition (i.e. 1/3 student funded vs. statewide 1/4 student funded) Previously administered by State Regents; Now have Board of Trustees

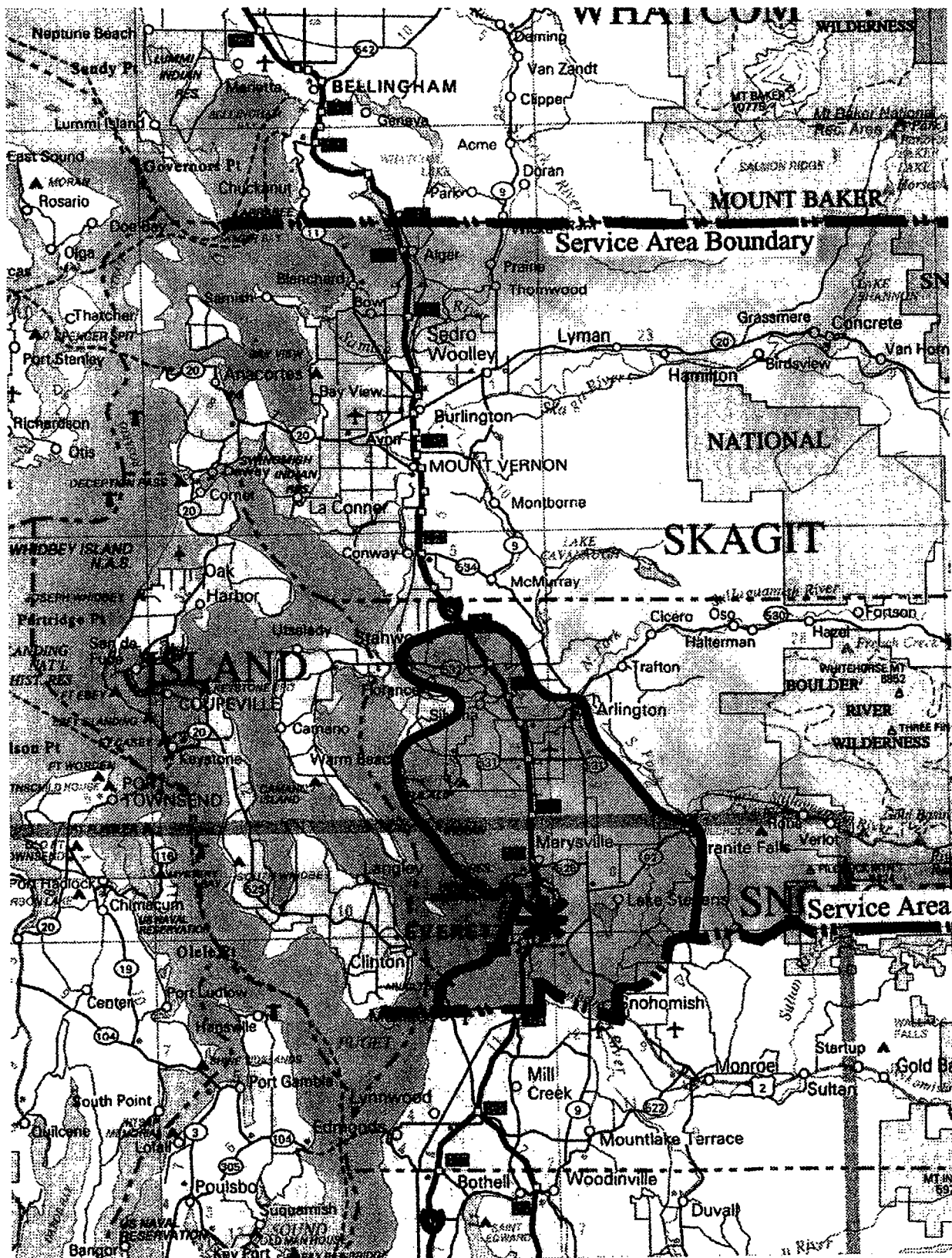
Appendix F

Locale Selection

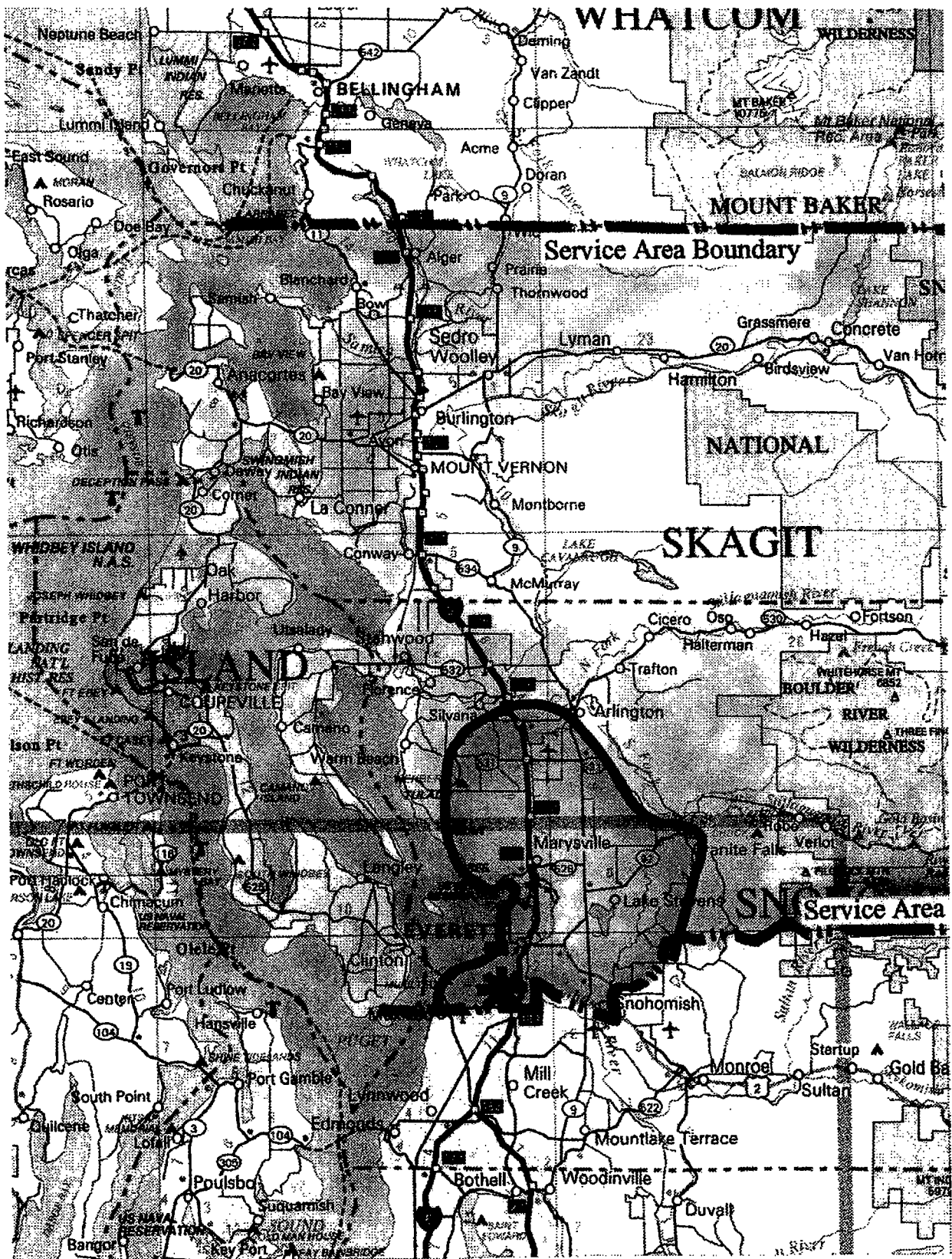
Appendix F-1
30-Minute Travel Distances



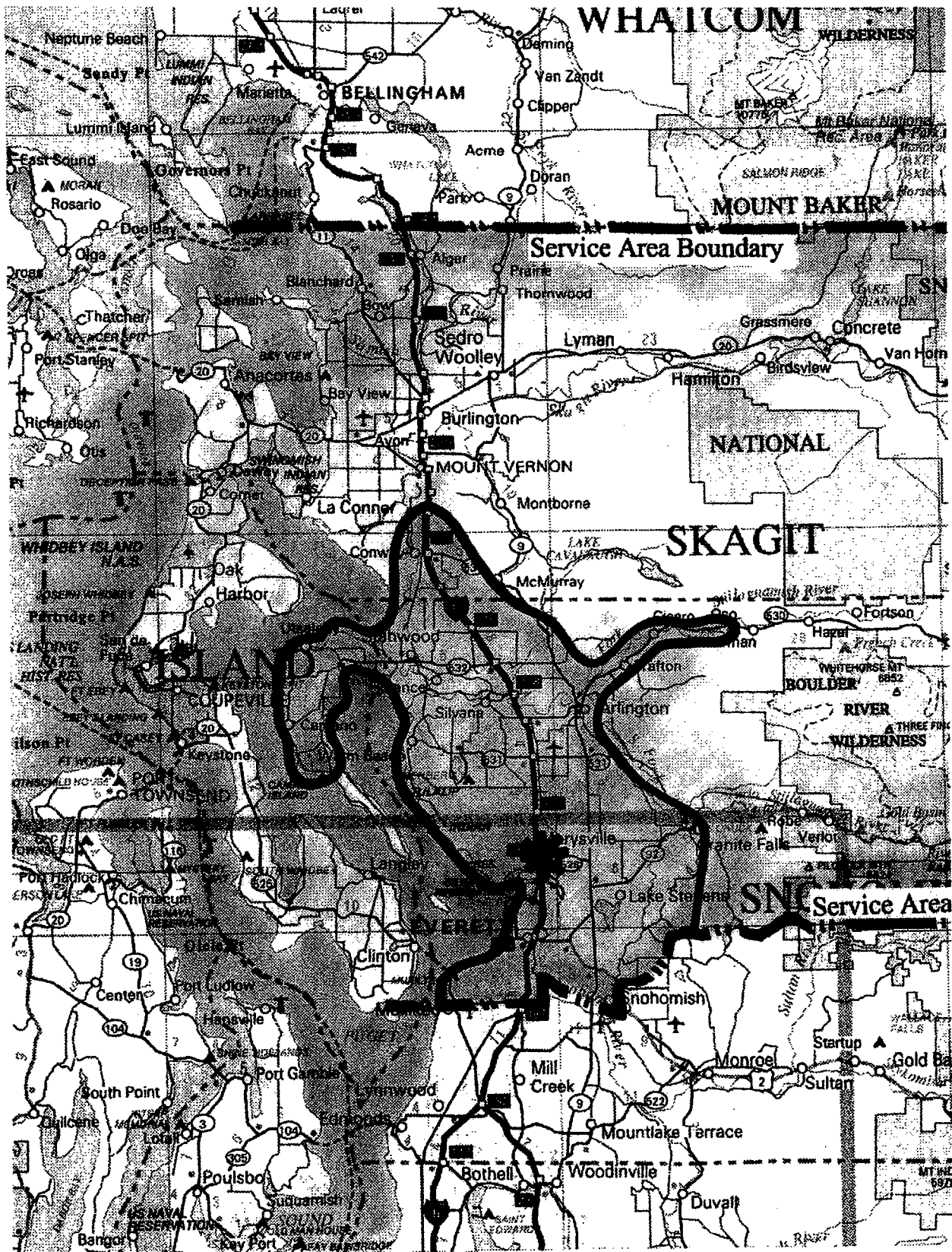
30-Minute Travel Time from Arlington



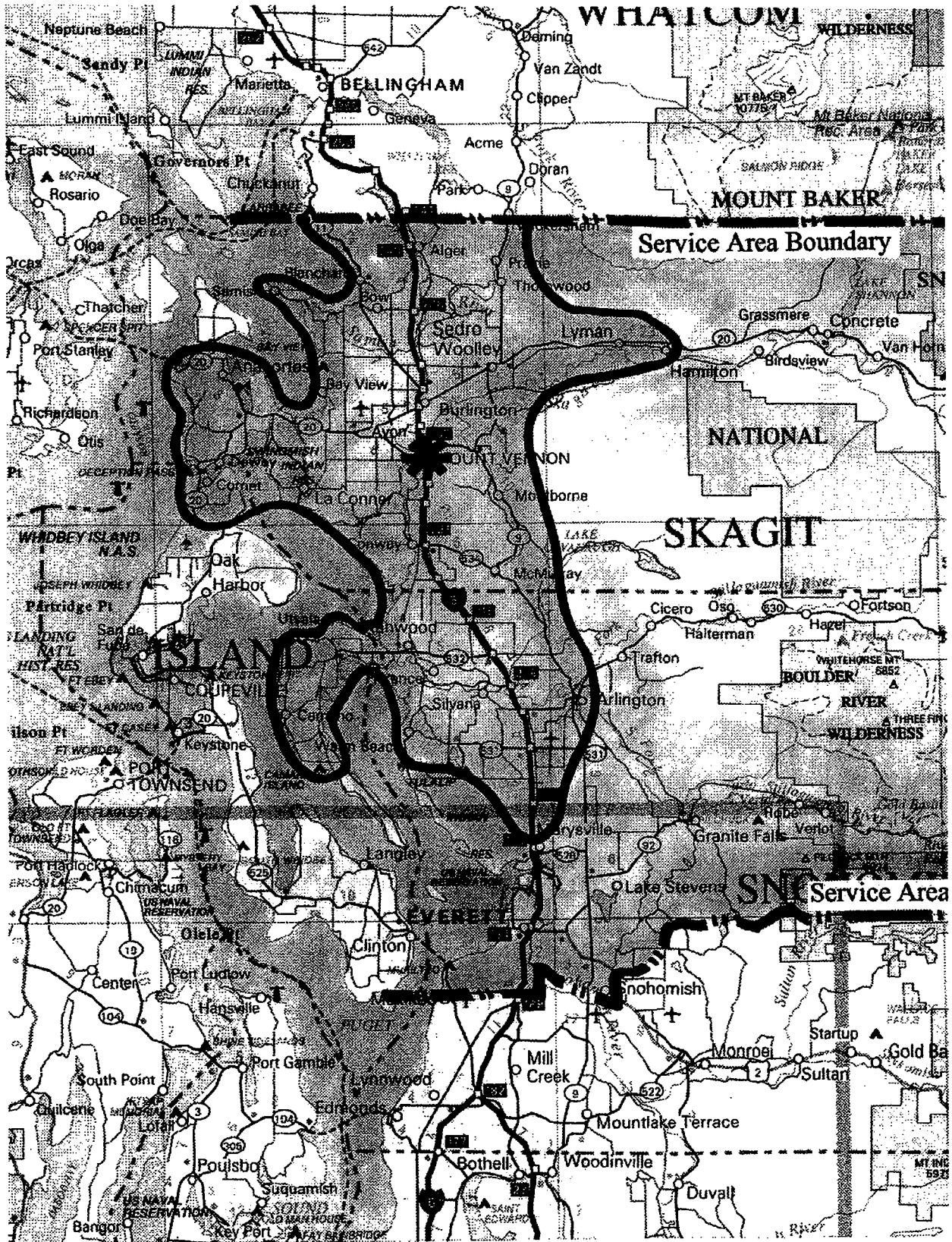
30-Minute Travel Time from North Everett



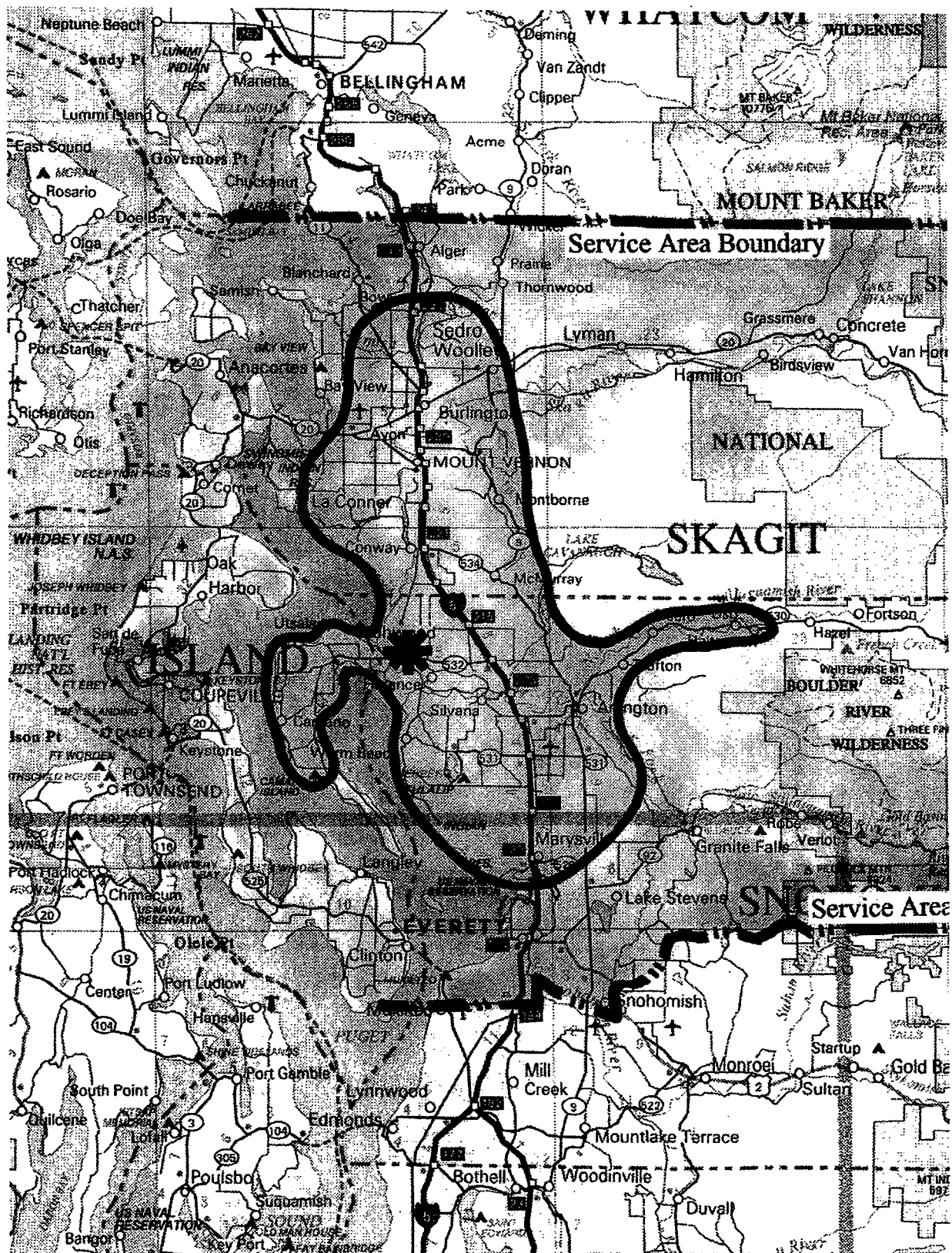
30-Minute Travel Time from South Everett



30-Minute Travel Time from Marysville



30-Minute Travel Time from Mount Vernon



30-Minute Travel Time from Stanwood

Appendix F-2
Technology Evaluation

Criteria # 6: Opportunities/barriers for Connectivity & Technology Readiness by Year 2005

This criteria was evaluated by three measures:

1. Potential telecommunications service for:

- ISDN
- Fiberoptics
- T1 - T3

Providers (e.g., US West, GTE) were contacted regarding extent of service area. Service areas were overlaid on candidate locale maps.

2. Potential Cable TV /TV Modem, & Internet Service providers

Providers of these services were identified for each locale. The types and extent of service and ability to provide and maintain quality of service was assessed.

3. Physical barriers to technology, including satellite

Potential physical constraints to telecommunications, satellite service were identified for each candidate locale. Potential constraints include:

commercial or government airports
topographical barriers (mountains)

Criterion 6:

Connectivity/Technology Readiness

Connectivity Technology	Everett S	Everett N	Marysville	Arlington	Stanwood	Mt. Vernon
Type: Telecom POTS ISDN T-1 FIBER <u>Score</u>	POTS, ISDN, T-1 svc. via GTE. Fiber paths on main arterials in city. I-5 corridor via Electric Lightwave (planned)	POTS, ISDN, T-1 svc. via GTE. Fiber paths on main arterials in city. I-5 corridor via Electric Lightwave(planned).	GTE fibers provided through general area I-5 corridor via ELW(planned), GTE fiber north towards Arlington.	GTE fibers through general city area. South to Marysville. I-5 corridor via ELW (planned). TCG also plans fiber path on I-5 corridor.	Fiber is very limited. Some GTE fiber loops around Sunday Lake and Lake Kechum. Mainly just for regular phone svc.	GTE fibers from Mt. Vernon to Burlington via Old 99, to Skagit College, E. on Division St. I-5 corridor via ELW (planned)
	5	5	4	4	1	3
Type: CATV Provider Internet ISP <u>Score</u>	TCI CATV provider. Potential upgrade path to Internet access.	TCI CATV provider. Potential upgrade path to Internet access.	TCI CATV provider. Potential upgrade path to Internet access.	TCI CATV provider. Potential upgrade path to Internet access.	Northland CATV provider-less likely for Internet upgrade.	TCI CATV provider. Potential upgrade path to Internet access.
	5	5	4	3	1	2
Type: Dish Satellite Microwave <u>Score</u>	Urban areas may restrict dish sightlines (site specific) Metro areas may limit microwave paths. (Code restrictions)	Urban areas may restrict dish sightlines (site specific) Metro areas may limit microwave paths.(Code restrictions).	More open for satellite. Microwave path more open. No apparant geographical barriers.	Possible interference from Jim Creek comm. station, East of city limits, broadcasting west towards water.	Elevation is lower, down in flood plain. Possible challenge for microwave and some satellites.	Satellite up/down ok. Would require a microwave repeater to get out via microwave.
	2	2	4	3	2	4
Type: Physical Proximity Ease of Access <u>Score</u>	Highly accessible from Lynnwood and North from Marysville. Less from Arlington, Stanwood. Close to urban growth areas.	Highly accessible from Lynnwood and North from Marysville, Arlington, Stanwood. Close to urban growth areas.	Well within 30 min drive from south centers. Still possible from Mt. Vernon.	Still accessible for Everett and Marysville. More likely from Mt. Vernon. I-5 corridor.	Farthest away from I-5 corridor. Not likely for access from Lynnwood, Everett and possibly Marysville.	Farthest north. Least likely for access from Lynnwood, Everett. Large coverage area north up to svc.area boundary.
	3	3	4	5	1	4

Appendix F-3
Application of Criteria

Appendix F-3

Application of Criteria

Criterion 1 and 2

Both of these criteria were measured through detailed analysis of the population and employment located within 15 and 30 minutes of each candidate locale. The following paragraphs summarize the methodology and data sources used for each step in the measurement process. Accompanying figures and tables display the results.

Step 1: Determine the area that represents 30- and 15-minute peak hour travel distances around each locale

The 30-minute and 15-minute peak period "commute-sheds" for each of the various nucleus facility locales (i.e., the areas that are within a 30-minute or 15-minute peak period commute of the locale) were determined by computing peak period travel distances via all access routes in all directions. Using an estimated peak period typical traffic speed for each road segment on each access route to/from each locale, the time it would take to travel each road segment was computed ($\text{time} = \text{distance} / \text{speed}$), and the 15-minute and 30-minute points along each access route were identified. Peak period typical speeds were developed through a combination of field observations and review of speed limit and traffic volume data (existing and future).

The 30-minute travel radius around each candidate locale are displayed in Appendix F-1. Travel times on the study area road system vary over the several hours of the so-called peak period. Travel times also vary from day to day with the day-to-day and seasonal fluctuations in traffic volumes and with the random occurrence of traffic accidents and other congestion-causing "incidents." For the purposes of determining the 30-minute and 15-minute travel distances from the various nucleus facility locale options, travel speeds were estimated for the most congested time of a typical day.

These speeds – and the resultant travel times – are representative of "typical worst-case" conditions (i.e., the worst/slowest conditions occurring on a typical day). These typical worst-case conditions do not change over time, and they were used as the basis for year 2000 and year 2010 travel time analyses. With rapidly growing traffic volumes and worsening peak period traffic congestion on the highway system, one might expect typical worst-case conditions to deteriorate as well. However, the typical day's worst-case travel times do in fact tend to remain constant, with increasing volumes and congestion manifesting themselves instead in expanding peak periods (i.e., congested conditions lasting for longer periods of time) and in more frequent accidents and incidents that cause extra-ordinary congestion and delay.

Step 2: Estimate the population and employment within the 30- and 15-minute travel radius for each candidate locale

The latest population and employment forecasts for Snohomish, Skagit and Island counties were used to estimate the level of population and employment expected to be located within the 30- and 15-minute radius of each candidate locale. For Snohomish and Skagit counties, forecast data by Transportation Analysis Zones (TAZ)—small areas that are used to plan for county-wide and regional transportation planning—were used as the basis for delineating the population and employment within the specified radius.

The accompanying tables display the estimated year 2000 and 2010 population and employment located within 30- and 15 minutes from each locale. The tables include the “captured” population and also display the percent of the service area population captured in each county.

These amounts are used as the “raw value” measurements for Criterion 1.

Step 3: Estimate the travel miles per person/employee served within the 30-minute travel radius for each locale.

The calculation of travel miles per person/employee served (Criterion 2) is shown in the last two of the accompanying tables. The methodology and rationale for estimating the travel miles per person/employee is described in Section IX. B.: Locale Selection main body of this report.

The estimations are based on the following assumptions/factors:

- ◆ Estimated year 2000 and 2010 population and employment within 30- and 15-minute travel distances from each locale have been calculated as described in Step 2 above. The estimated number of persons/employees located between 15 and 30 minutes from each locale was calculated by subtracting the numbers located within 15 minutes from the numbers located within 30 minutes.
- ◆ To estimate total travel miles driven, it is assumed that the average trip for the segment located within 15 minutes is 8.33 miles, while the average trip for the segment located between 15 and 30 minutes is 20.83. These factors assume an average distance of 10 miles and 25 miles, respectively, for the under 15 minute and 15-30 minute segments, with an average speed of 50 miles per hour.

The amounts calculated using these assumptions become the “raw values” measurements for Criterion 2.

Criterion 3 through 6

The findings for Criteria 3 through 5 for each locale are discussed in Section IX.E: Locale Selection-Results of the main body of this report.

The accompanying matrix details the findings for Criterion 6: Opportunities/Barriers for Connectivity and Technology Readiness.

Locale Analysis
Population within 30-Minute Travel Time

<u>Locale</u>	<u>Year 2000 Population Within 30 Minutes</u>				<u>Percent of Service Area Population</u>			
	<u>Snohomish</u>	<u>Skagit</u>	<u>Island</u>	<u>Total</u>	<u>Snohom.</u>	<u>Skagit</u>	<u>Island</u>	<u>Total</u>
Everett South	186,763	-	-	186,763	84%	0%	0%	46%
Everett North	204,342	-	-	204,342	92%	0%	0%	50%
Marysville	213,314	2,328	9,773	225,415	96%	2%	13%	55%
Arlington	217,282	35,878	9,773	262,933	98%	32%	13%	64%
Stanwood	97,157	70,349	9,773	177,279	44%	63%	13%	43%
Mount Vernon	67,397	110,661	13,974	192,032	30%	99%	19%	47%
North Marysville	218,000	12,681	9,773	240,454	98%	11%	13%	59%

<u>Locale</u>	<u>Year 2010 Population</u>				<u>Percent of Service Area Population</u>			
	<u>Snohomish</u>	<u>Skagit</u>	<u>Island</u>	<u>Total</u>	<u>Snohom.</u>	<u>Skagit</u>	<u>Island</u>	<u>Total</u>
Everett South	219,500	-	-	219,500	85%	0%	0%	46%
Everett North	240,188	-	-	240,188	93%	0%	0%	50%
Marysville	250,751	2,533	12,064	265,348	97%	2%	14%	56%
Arlington	255,133	44,414	12,064	311,611	98%	34%	14%	65%
Stanwood	118,716	86,331	12,064	217,111	46%	65%	14%	45%
Mount Vernon	82,187	130,933	16,717	229,837	32%	99%	19%	48%
North Marysville	255,000	14,994	12,064	282,058	98%	11%	14%	59%

Locale Analysis
Population within 15-Minute Travel Time

<u>Locale</u>	<u>Year 2000 Population Within 15 Minutes</u>				<u>Percent of Service Area Population</u>			
	<u>Snohomish</u>	<u>Skagit</u>	<u>Island</u>	<u>Total</u>	<u>Snohom.</u>	<u>Skagit</u>	<u>Island</u>	<u>Total</u>
Everett South	123,768	-	-	123,768	56%	0%	0%	30%
Everett North	137,436	-	-	137,436	62%	0%	0%	34%
Marysville	137,242	-	-	137,242	62%	0%	0%	34%
Arlington	87,980	-	-	87,980	40%	0%	0%	22%
Stanwood	26,120	5,543	1,955	33,618	12%	5%	3%	8%
Mount Vernon	441	111,567	-	112,008	0%	100%	0%	27%
North Marysville	105,673	-	-	105,673	48%	0%	0%	26%

<u>Locale</u>	<u>Year 2010 Population</u>				<u>Percent of Service Area Population</u>			
	<u>Snohomish</u>	<u>Skagit</u>	<u>Island</u>	<u>Total</u>	<u>Snohom.</u>	<u>Skagit</u>	<u>Island</u>	<u>Total</u>
Everett South	142,513	-	-	142,513	55%	0%	0%	30%
Everett North	157,817	-	-	157,817	61%	0%	0%	33%
Marysville	158,741	-	-	158,741	61%	0%	0%	33%
Arlington	106,500	-	-	106,500	41%	0%	0%	22%
Stanwood	31,447	7,226	2,413	41,087	12%	5%	3%	9%
Mount Vernon	541	131,885	-	132,426	0%	100%	0%	28%
North Marysville	125,361	-	-	125,361	48%	0%	0%	26%

Locale Analysis
Employment within 30-Minute Travel Time

<u>Locale</u>	<u>Year 2000 Employment Within 30 Minutes</u>				<u>Percent of Service Area Employment</u>			
	<u>Snohomish</u>	<u>Skagit</u>	<u>Island</u>	<u>Total</u>	<u>Snohom.</u>	<u>Skagit</u>	<u>Island</u>	<u>Total</u>
Everett South	93,658	-	-	93,658	89%	0%	0%	52%
Everett North	99,880	-	-	99,880	95%	0%	0%	55%
Marysville	100,456	156	399	101,012	96%	0%	1%	56%
Arlington	100,508	22,658	399	123,564	96%	50%	1%	68%
Stanwood	22,363	34,499	399	57,260	21%	75%	1%	32%
Mount Vernon	16,309	45,616	2,217	64,141	16%	100%	7%	35%
North Marysville	100,500	8,126	399	109,025	96%	18%	1%	60%

<u>Locale</u>	<u>Year 2010 Employment</u>				<u>Percent of Service Area Employment</u>			
	<u>Snohomish</u>	<u>Skagit</u>	<u>Island</u>	<u>Total</u>	<u>Snohom.</u>	<u>Skagit</u>	<u>Island</u>	<u>Total</u>
Everett South	120,421	-	-	120,421	90%	0%	0%	53%
Everett North	128,869	-	-	128,869	97%	0%	0%	56%
Marysville	129,524	160	537	130,221	97%	0%	1%	57%
Arlington	129,590	28,016	537	158,144	97%	49%	1%	69%
Stanwood	28,426	42,984	537	71,948	21%	75%	1%	32%
Mount Vernon	20,761	57,119	2,636	80,516	16%	100%	7%	35%
North Marysville	129,550	9,902	537	139,989	97%	17%	1%	61%

Locale Analysis
Employment within 15-Minute Travel Time

<u>Locale</u>	<u>Year 2000 Employment Within 15 Minutes</u>				<u>Percent of Service Area Employment</u>			
	<u>Snohomish</u>	<u>Skagit</u>	<u>Island</u>	<u>Total</u>	<u>Snohom.</u>	<u>Skagit</u>	<u>Island</u>	<u>Total</u>
Everett South	82,520	-	-	82,520	74%	0%	0%	44%
Everett North	77,048	-	-	77,048	69%	0%	0%	41%
Marysville	76,992	-	-	76,992	69%	0%	0%	41%
Arlington	21,822	-	-	21,822	19%	0%	0%	12%
Stanwood	6,871	996	80	7,946	6%	2%	0%	4%
Mount Vernon	127	45,700	-	45,827	0%	100%	0%	24%
North Marysville	49,861	-	-	49,861	44%	0%	0%	26%

<u>Locale</u>	<u>Year 2010 Employment</u>				<u>Percent of Service Area Employment</u>			
	<u>Snohomish</u>	<u>Skagit</u>	<u>Island</u>	<u>Total</u>	<u>Snohom.</u>	<u>Skagit</u>	<u>Island</u>	<u>Total</u>
Everett South	105,658	-	-	105,658	79%	0%	0%	46%
Everett North	99,529	-	-	99,529	75%	0%	0%	44%
Marysville	100,140	-	-	100,140	75%	0%	0%	44%
Arlington	27,707	-	-	27,707	21%	0%	0%	12%
Stanwood	8,344	1,846	107	10,297	6%	3%	0%	5%
Mount Vernon	142	57,200	-	57,342	0%	100%	0%	25%
North Marysville	68,551	-	-	68,551	51%	0%	0%	30%

Locale Analysis
Estimate of Travel Miles Per Person/Employee Served (Within 30 Minutes)
Projected for Year 2000
Population

<u>Locale</u>	<u>Population Served</u>				<u>Total Travel Miles for Population Served</u>					
	<u>Within 15 Minutes</u>		<u>15 to 30 Minutes</u>		<u>Within 15 Minutes</u>		<u>15 to 30 Minutes</u>		<u>Total Travel Miles</u>	
	% of Serv.		% of Serv.		Average		Average		Total	
	<u>Number</u>	<u>Area Tot.</u>	<u>Number</u>	<u>Area Tot.</u>	<u>Travel Miles</u>	<u>Travel Miles</u>	<u>Travel Miles</u>	<u>Travel Miles</u>	<u>Total</u>	<u>Per Person Served</u>
Everett South	123,768	30%	62,995	15%	8.33	1,030,990	20.83	1,312,180	2,343,170	12.55
Everett North	137,436	34%	66,906	16%	8.33	1,144,838	20.83	1,393,661	2,538,499	12.42
Marysville	137,242	34%	88,173	22%	8.33	1,143,228	20.83	1,836,637	2,979,865	13.22
Arlington	87,980	22%	174,952	43%	8.33	732,877	20.83	3,644,257	4,377,135	16.65
Stanwood	33,618	8%	143,661	35%	8.33	280,034	20.83	2,992,466	3,272,500	18.46
Mount Vernon	112,008	27%	80,024	20%	8.33	933,027	20.83	1,666,895	2,599,921	13.54

Population: Year 2010

<u>Locale</u>	<u>Population Served</u>				<u>Total Travel Miles for Population Served</u>					
	<u>Within 15 Minutes</u>		<u>15 to 30 Minutes</u>		<u>Within 15 Minutes</u>		<u>15 to 30 Minutes</u>		<u>Total Travel Miles</u>	
	% of Serv.		% of Serv.		Average		Average		Total	
	<u>Number</u>	<u>Area Tot.</u>	<u>Number</u>	<u>Area Tot.</u>	<u>Travel Miles</u>	<u>Travel Miles</u>	<u>Travel Miles</u>	<u>Travel Miles</u>	<u>Total</u>	<u>Per Person Served</u>
Everett South	142,513	30%	76,987	16%	8.33	1,187,135	20.83	1,603,636	2,790,770	12.71
Everett North	157,817	33%	82,371	17%	8.33	1,314,617	20.83	1,715,785	3,030,402	12.62
Marysville	158,741	33%	106,607	22%	8.33	1,322,310	20.83	2,220,627	3,542,937	13.35
Arlington	106,500	22%	205,112	43%	8.33	887,142	20.83	4,272,476	5,159,618	16.56
Stanwood	41,087	9%	176,024	37%	8.33	342,251	20.83	3,666,587	4,008,839	18.46
Mount Vernon	132,426	28%	97,410	20%	8.33	1,103,110	20.83	2,029,057	3,132,167	13.63

<u>North Marysville</u>	<u>Population Served</u>				<u>Total Travel Miles for Population Served</u>					
	<u>Within 15 Minutes</u>		<u>15 to 30 Minutes</u>		<u>Within 15 Minutes</u>		<u>15 to 30 Minutes</u>		<u>Total Travel Miles</u>	
	% of Serv.		% of Serv.		Average		Average		Total	
	<u>Number</u>	<u>Area Tot.</u>	<u>Number</u>	<u>Area Tot.</u>	<u>Travel Miles</u>	<u>Travel Miles</u>	<u>Travel Miles</u>	<u>Travel Miles</u>	<u>Total</u>	<u>Per Person Served</u>
Year 2000	105,673	26%	134,782	33%	8.33	880,252	20.83	2,807,508	3,687,760	15.34
Year 2010	125,361	26%	156,697	33%	8.33	1,044,260	20.83	3,263,990	4,308,250	15.27

Locale Analysis
Estimate of Total Travel Miles for Employment Located Within 30 Minutes

Employment: Year 2000

<u>Locale</u>	<u>Employment Served</u>				<u>Total Travel Miles for Employment Served</u>					
	<u>Within 15 Minutes</u>		<u>15 to 30 Minutes</u>		<u>Within 15 Minutes</u>		<u>15 to 30 Minutes</u>		<u>Total Travel Miles</u>	
	<u>Number</u>	<u>% of Serv.</u>	<u>Number</u>	<u>% of Serv.</u>	<u>Average</u>	<u>Total</u>	<u>Average</u>	<u>Total</u>	<u>Total</u>	<u>Per Person</u>
	<u>Area Tot.</u>		<u>Area Tot.</u>		<u>Travel Miles</u>	<u>Travel Miles</u>	<u>Travel Miles</u>	<u>Travel Miles</u>	<u>Served</u>	
Everett South	82,520	44%	11,138	6%	8.33	687,392	20.83	232,000	919,392	9.82
Everett North	77,048	41%	22,832	13%	8.33	641,812	20.83	475,586	1,117,398	11.19
Marysville	76,992	41%	24,020	13%	8.33	641,343	20.83	500,329	1,141,672	11.30
Arlington	21,822	12%	101,742	56%	8.33	181,778	20.83	2,119,286	2,301,064	18.62
Stanwood	7,946	4%	49,314	27%	8.33	66,191	20.83	1,027,215	1,093,407	19.10
Mount Vernon	45,827	24%	18,314	10%	8.33	381,741	20.83	381,480	763,221	11.90

Employment: Year 2010

<u>Locale</u>	<u>Employment Served</u>				<u>Total Travel Miles for Employment Served</u>					
	<u>Within 15 Minutes</u>		<u>15 to 30 Minutes</u>		<u>Within 15 Minutes</u>		<u>15 to 30 Minutes</u>		<u>Total Travel Miles</u>	
	<u>Number</u>	<u>% of Serv.</u>	<u>Number</u>	<u>% of Serv.</u>	<u>Average</u>	<u>Total</u>	<u>Average</u>	<u>Total</u>	<u>Total</u>	<u>Per Person</u>
	<u>Area Tot.</u>		<u>Area Tot.</u>		<u>Travel Miles</u>	<u>Travel Miles</u>	<u>Travel Miles</u>	<u>Travel Miles</u>	<u>Served</u>	
Everett South	105,658	46%	14,763	6%	8.33	880,128	20.83	307,516	1,187,645	9.86
Everett North	99,529	44%	29,340	13%	8.33	829,072	20.83	611,159	1,440,232	11.18
Marysville	100,140	44%	30,081	13%	8.33	834,169	20.83	626,587	1,460,756	11.22
Arlington	27,707	12%	130,436	57%	8.33	230,801	20.83	2,716,988	2,947,789	18.64
Stanwood	10,297	5%	61,651	27%	8.33	85,772	20.83	1,284,188	1,369,960	19.04
Mount Vernon	57,342	25%	23,174	10%	8.33	477,656	20.83	482,717	960,373	11.93

<u>North Marysville</u>	<u>Employment Served</u>				<u>Total Travel Miles for Employment Served</u>					
	<u>Within 15 Minutes</u>		<u>15 to 30 Minutes</u>		<u>Within 15 Minutes</u>		<u>15 to 30 Minutes</u>		<u>Total Travel Miles</u>	
	<u>Number</u>	<u>% of Serv.</u>	<u>Number</u>	<u>% of Serv.</u>	<u>Average</u>	<u>Total</u>	<u>Average</u>	<u>Total</u>	<u>Total</u>	<u>Per Person</u>
	<u>Area Tot.</u>		<u>Area Tot.</u>		<u>Travel Miles</u>	<u>Travel Miles</u>	<u>Travel Miles</u>	<u>Travel Miles</u>	<u>Served</u>	
Year 2000	49,861	26%	59,164	33%	8.33	415,346	20.83	1,232,381	1,647,727	15.11
Year 2010	68,551	30%	71,438	31%	8.33	571,032	20.83	1,488,054	2,059,086	14.71

Locale Analysis

Criterion 6

Connectivity/Technology Readiness

Urban Growth Area

Connectivity Technology	Everett S	Everett N	Marysville	Arlington	Stanwood	Mt. Vernon
Type: Telecom POTS	POTS, ISDN, T-1 svc. via GTE. Fiber paths on main arterials in city. I-5 corridor via Electric Lightwave (planned)	POTS, ISDN, T-1 svc. via GTE. Fiber paths on main arterials in city. I-5 corridor via Electric Lightwave(planned).	GTE fibers provided through general area. I-5 corridor via ELW(planned), GTE fiber north towards Arlington.	GTE fibers through general city area. South to Marysville. I-5 corridor via ELW (planned). TCG also plans fiber path on I-5 corridor.	Fiber is very limited. Some GTE fiber loops around Sunday Lake and Lake Kechum. Mainly just for regular phone svc.	GTE fibers from Mt. Vernon to Burlington via Old 99, to Skagit College, E. on Division St. I-5 corridor via ELW (planned)
ISDN	5	5	4	4	1	3
<u>Score</u>						
Type: CATV Provider	TCI CATV provider. Potential upgrade path to Internet access.	TCI CATV provider. Potential upgrade path to Internet access.	TCI CATV provider. Potential upgrade path to Internet access.	TCI CATV provider. Potential upgrade path to Internet access.	Northland CATV provider-less likely for Internet upgrade.	TCI CATV provider. Potential upgrade path to Internet access.
Internet ISP	5	5	4	3	1	2
<u>Score</u>						
Type: Dish Satellite	Urban areas may restrict dish sightlines (site specific) Metro areas may limit microwave paths. (Code restrictions)	Urban areas may restrict dish sightlines (site specific) Metro areas may limit microwave paths.(Code restrictions.)	More open for satellite. Microwave path more open. No apparant geographical barriers.	Possible interference from Jim Creek comm. station, East of city limits, broadcasting west towards water.	Elevation is lower, down in flood plain. Possible challenge for microwave and some satellites.	Satellite up/down ok. Would require a microwave repeater to get out via microwave.
Microwave	2	2	4	3	2	4
<u>Score</u>						
Type: Physical Proximity	Highly accessible from Lynnwood and North from Marysville. Less from Arlington, Stanwood. Close to urban growth areas.	Highly accessible from Lynnwood and North from Marysville, Arlington, Stanwood. Close to urban growth areas.	Well within 30 min drive from south centers. Still possible from Mt. Vernon.	Still accessible for Everett and Marysville. More likely from Mt. Vernon. I-5 corridor.	Farthest away from I-5 corridor. Not likely for access from Lynnwood, Everett.	Farthest north. Least likely for access from Lynnwood, Everett. Large coverage area north up to svc.area boundary.
Ease of Access	3	3	4	5	1	4
<u>Score</u>						
Aggregate Score:	15	15	16	15	5	13